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CIVIL DEFENSE: A REPORT TO THE MEMBERSHIP

JAN H. TILLISCH, M.D.

Rochester, Minnesota

and

JOHN T. SMILEY, M.D.

Minneapolis, Minnesota

CIVIL defense is like virtue—everyone is for it but comparatively few people do much about it. Yet civil defense is a highly personal necessity. In any type of disaster, you, your family or your community may be involved.

The need for civil defense is apparent with the negation of our natural geographic defenses by intercontinental bombers and guided missiles. This means that whether we are engaged in a hot war, a cold war or no war, we can no longer depend on oceans for protection; thus, a scheme must be evolved for civil defense that will be effective and long standing. Adequate civil defense offers a chance for survival but also acts as a deterrent to the enemy. One of the factors that led Hitler to decide against invasion of England was the well-co-ordinated program of civil defense present in Great Britain.

More specifically, the need for civil defense is evident in view of the weapons now available. The atomic bomb is the most imposing of the new array of weapons, and many civil-defense activities have been pointed toward defense against and survival of disasters caused by atomic bombs. However, this country should not prepare for one emergency to the exclusion of all others. High-explosive bombing in World War II reached a new and appalling degree of efficiency. Chemical warfare is a threat that assumes terrifying proportions with the realization that chemical weapons can be delivered by plane or guided missile

into the midst of an unsuspecting and unprepared people. This is also true of bacteriologic warfare, a method as yet untried. Finally, the actual invasion of the United States by enemy troops is a possibility that cannot be ignored. Thus, it can be seen that many aspects are present in civil defense, but one recurrent need appears in all, namely, the requirement of a medical program.

Less horrifying than the possibilities just mentioned but more likely to occur is a local storm, fire or flood of such magnitude that local facilities cannot cope with it. Such possibilities constitute an ever-present problem and emphasize the need for not only an efficient and well-co-ordinated medical program for use in time of war but also placement of such a program on a permanent basis.

The Minnesota Civil Defense Law

In Minnesota, civil defense has been recognized by law as a governmental responsibility. In 1951, the legislature established the Civil Defense Advisory Council and appropriated funds for the organization and operation of a permanent State Department of Civil Defense. The same law stated that every municipality must appoint a director of civil defense and create a civil-defense organization. It authorized the levying of taxes to finance community work in civil defense.

The director of the Minnesota Department of Civil Defense is Colonel E. B. Miller, who was appointed by the governor. Permanent headquarters have been established at 1643 Rice Street, St. Paul 3, Minnesota. Regional offices have been established in St. Paul, North Mankato, St. Cloud, Bemidji and Hibbing.

Dr. Tillisch is chairman of the Committee on Military Affairs, Minnesota State Medical Association.

Dr. Smiley is Director, Office of Health Service and Special Weapons Defense, Minnesota Department of Civil Defense.

The State Department of Civil Defense is a coordinating agency in predisaster planning; it would have a supporting role should an attack occur. The operating cost of the State Department of Civil Defense is borne by the state without help from the federal government. Likewise the operating cost of departments of civil defense in cities and villages must be paid by the local community. From federal sources, \$450,000 was allocated to Minnesota for the purchase of medical supplies and equipment to be stockpiled for possible future use. However, these funds were made available only when they were matched dollar for dollar by the state or by its component municipalities. No outright grants have been made to Minnesota or any other state for purposes of civil defense.

From an appropriation made in 1951 by the legislature to purchase organizational equipment for civil-defense units, \$10,000 has been used to match federal money in the purchase of medical supplies. This was spent to equip twenty teams manning mobile first-aid stations. The three largest cities in the state have matched collectively slightly less than \$7,000 for medical supplies. It should be clearly understood that the civil-defense plan in Minnesota does not include requests for huge sums of money. It is based on the belief that existing local resources should be used, supplemented only by the acquisition of equipment and supplies peculiar to civil-defense operation and not normally available.

The Medical Civil Defense Plan

Through the Civil Defense Medical Advisory Committee, the Minnesota State Medical Association was given a definite responsibility for the initiation of medical civil-defense plans. The Committee on Military Affairs was in turn designated to work with the Minnesota Department of Health and with a committee of the Minnesota Hospital Association in the development of detailed plans. In its approach to the problem of creation of a really practical, long-term, simple plan for statewide application, this group decided to set up a single hypothetical situation and then to develop a scheme to meet it. The hypothetical situation was a simultaneous attack with atomic bombs on the Twin Cities and Duluth.

Emergency medical care apparently was the most urgent and difficult problem, so this was tackled first. This emergency medical care divided itself naturally into four categories as follows:

1. Self-help—assistance given to its injured by the stricken community itself.
2. Mutual aid—assistance given to the injured of a stricken community by other communities immediately adjacent to it.
3. Mobile support—assistance given to the injured of a stricken community by teams brought under state control from outlying communities.
4. Fixed support—assistance given to the injured of a stricken community by an outlying community that receives them into its own home facilities.

Beginning with the last of the four categories, a plan was prepared called "The Support of the Twin Cities and Duluth in the Emergency Medical Care Phase of Civil Defense." This plan was designed to provide a pattern of operation for the whole state in the fixed-support portion of the operation. It designated seventy-eight communities as the points at which definitive hospitalization and medical care are to be provided. It also directed that these communities be organized to receive an overwhelming number of medical evacuees. It prescribed routes of evacuation from the areas of disaster and asked that each community organize a team to control traffic. It prescribed in a general way the medical responsibilities of each region in the state. This plan was approved by the Civil Defense Advisory Council on February 24, 1952. Copies have been sent to every member of the Minnesota State Medical Association.

At the same time, the Council approved the outline of a plan to deal with the mobile-support portion of the operation. On September 1, 1952, that plan was launched. It provided for the organization of the previously mentioned twenty mobile first-aid teams that could be rushed to the periphery of a region of disaster to support local facilities. The communities selected as sites for the organization of these teams are:

- | | |
|---------------|------------------|
| 1. Stillwater | 11. Cambridge |
| 2. Red Wing | 12. Brainerd |
| 3. Northfield | 13. Cloquet |
| 4. Owatonna | 14. Bemidji |
| 5. St. Peter | 15. Grand Rapids |
| 6. Hutchinson | 16. Hibbing |
| 7. Anoka | 17. Ely |
| 8. Buffalo | 18. Virginia |
| 9. Willmar | 19. Faribault |
| 10. Princeton | 20. Mankato |

The equipment for these teams has been ordered and has begun to arrive at the State Training School in Red Wing, where it is to be sorted, repacked and stored temporarily. It was purchased with the combination of federal and state funds previously referred to. The civil-defense directors of the designated communities must select the captains of the teams, who are to be physicians, and must take the initiative in the organization of the team in each community. Selection of the sites for the locations of teams has been influenced by the probability that the Twin Cities and Duluth will be the most likely targets and will have the most acute needs. The plan assumes, however, that these teams providing medical care will be available to go to the support of any community in Minnesota that suffers a disaster with which it cannot cope. The same is true of the plan for fixed support. It is necessary only to rearrange the routes of evacuation to produce a plan for the support of any community in the state.

Additional plans must be developed. At present some ideas are being discussed regarding the creation of agreements for mutual aid. Other phases of medical operations in civil defense include the following: (1) ordinary medical care of the populace in regions removed from disaster; (2) medical care and hospitalization in refugee camps; (3) medical care of civil-defense forces; (4) treatment and handling of casualties of chemical attack and (5) detection of radioactivity and handling and treatment of persons contaminated with radioactive materials.

All these factors must be considered in the light of conditions imposed by the hypothetical disaster, and plans must be developed to cover these eventualities as far as possible within the limitations of probable resources of the state and the

ability of the committees to see clearly the problems to be expected.

Role of the Individual Physician

The importance of the physician in state civil defense is apparent from the plans mentioned. The physician's place in the community and his responsibility for the care of his fellow man makes it necessary for him to give the program full support. It appears likely that every able-bodied physician in civilian practice in the state can expect to be asked to take part in civil defense, in either a key position or a supporting role. Even if the physician is not called on now for active participation in the program of preparedness, he should realize that he is part of the reserve that may be called on to put these plans into action. Therefore, all physicians in the state should be informed about and interested in all phases of civil defense. They should respond promptly and cheerfully to requests for counsel and for active participation in the civil-defense activities in their community.

The physician can aid in civil defense in other ways because of his position as a leader and medical adviser in his community. The first-aid program of the American Red Cross should be encouraged and given all possible support. This applies most strongly to recruitment of donors for the blood program. Education of the community in regard to the medical aspects of civil defense is a physician's responsibility. This may be discharged through individual discussion with local citizens or talks to various organizations. The physician should keep informed about latest developments in the medical aspects of civil defense by reading and by attendance at medical meetings. By such methods, we, the physicians who form the keystone of civil defense, can give effective support to this important matter.

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BRUCELLOSIS IN MAN

A Study of Thirty-five Cases Due to *Brucella Abortus*

WENDELL H. HALL, M.D., Ph.D.
Minneapolis, Minnesota

THE CLINICAL course of human brucellosis has been well defined by Hughes,¹² Eyre⁸ and others. With few exceptions, these reports have been based upon studies of patients infected with *Brucella melitensis*. The course of human infections due to *Br. suis* has been clearly described by Jordan and Borts.¹³ This paper summarizes our experiences at the Minneapolis Veterans Administration Hospital with thirty-five patients having brucellosis proved by culture to be caused by *Br. abortus*. Epidemiologic, diagnostic and therapeutic observations are emphasized.

Material

The patients were all hospitalized. An unusual opportunity was afforded us to observe the progress of these patients. They have been re-examined in the hospital at intervals of one to six months for as long as six years. They were all males and their ages ranged from twenty-one to fifty-nine years (mean = 35.7 years). These patients came from the upper Midwest, principally from Minnesota and Wisconsin. This region possesses several large meat packing plants, but the area is largely agricultural with emphasis upon dairy cattle. Thirteen patients were farmers who owned cows with contagious abortion or Bang's disease. Fifteen patients were packing plant employes; four worked on beef kill, eight on hog kill and three were not exposed to fresh meat. There was one veterinarian. Six patients had no direct animal contacts, but five of these consumed unpasteurized milk or cheese and one often repaired radios covered with manure.

We were able to examine the families of five of the patients who lived on farms. Only two of the fifteen related people were ill, yet six had

Brucella agglutinins in their serum. One fifteen-year-old girl, who had no recognizable illness, was found to have an agglutinin titer of 1:160 and *Br. abortus* was isolated from her blood. Most of these people had little contact with animals but were drinking unpasteurized milk from infected cattle.

Methods of Study

All thirty-five patients were admitted to the hospital and examined carefully by the usual clinical and laboratory methods. None of them had received *Brucella* vaccine or skin tests prior to examination nor were they used by us.

***Brucella* Agglutinins.**—We have frequently employed Castaneda's rapid slide or "spot" test³ for the quick detection of patients having brucellosis and have found it useful in the presence of active infection.⁷ However, in all instances we have found it advisable to measure the titer of agglutinins by the tube dilution method of Fitch.⁶ Incubation was carried out for twenty-four hours at 37° C. The antigen was heat-killed *Br. abortus* supplied by the Bureau of Animal Industry, U. S. Department of Agriculture, Beltsville, Maryland.

The *Brucella* opsonocytaphagic index, precipitin test and complement-fixation tests were not used routinely. The tube-dilution agglutinin test has proved simpler, safe and more reliable. The results of comparative studies with other agglutinin methods have been published elsewhere.⁷

Cultures for *Brucella*.—At least three blood cultures were obtained from each patient before chemotherapy was started. Cultures of sternal bone marrow were frequently obtained as well as histologic sections of the marrow units in a search for granulomas.²³ The Castaneda⁴ double medium culture bottle was used throughout this study. We employed a 100 ml. "French square" bottle closed with a rubber diaphragm stopper and containing 15 ml. of 3 per cent trypticase soy agar* allowed to harden on one side of the bottle. After the agar had solidified, 10 ml. of trypticase soy broth

From the Veterans Administration Hospital, Minneapolis, Minnesota and the Department of Medicine, The Medical School, University of Minnesota.

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Presented to the First Inter-American Congress of Hygiene, Havana, Cuba, on October 1, 1952, and to the Minnesota Academy of Medicine, on December 10, 1952.

*Obtained from Baltimore Biological Laboratory, Inc., 1640 Gorsuch Avenue, Baltimore 18, Maryland.

BRUCELLOSIS IN MAN—HALL

containing 2.0 per cent sodium citrate was introduced with sterile precautions. Five ml. of venous blood or other infected material was then introduced aseptically with a needle and syringe. Ten per cent of the atmosphere was replaced with carbon dioxide.** The bottle was incubated in the vertical position at 37° C. The slant was inspected for growth and then the blood-broth mixture was allowed to flow across the slant twice weekly. Unless growth occurred earlier all cultures were incubated thirty days before being discarded.

Identification of the organism was based upon Gram stain, motility test, sugar fermentation, carbon dioxide requirement, urease production, growth on basic fuchsin and thionine dye plates, and agglutination by specific anti-Brucella serum.

Results

The symptoms experienced by these thirty-five patients are listed in Table I. Almost all patients had multiple and varied complaints. The predominant symptoms, such as weakness, sweats and general malaise, were nonspecific. Clear-cut symptoms relating to a specific anatomic system (digestive, respiratory, et cetera), usually were lacking. Symptoms of the disease persisted for an average of 4.6 months in the thirty-one patients where such data were complete. The range was from two weeks to fifteen months.

In spite of multiple symptoms there usually were few physical abnormalities (Table II). Fever was present at some time in all of the thirty-five patients but varied considerably in degree and pattern. In some only a transient, low-grade fever was recorded with a predominantly normal temperature even in the presence of bacteremia. Most patients had chills (Table I) and a diurnal fever to 103° F. or higher for a few days early in the disease but their temperature usually returned to normal in less than two weeks.* A plateau fever was never observed; although the temperature often rose to 104-105° F. in the afternoons, it usually declined in the eve-

**We suspect that it is not necessary to add carbon dioxide for venous blood cultures. Venous blood (5 ml.) should contain adequate carbon dioxide. For three years duplicate venous blood cultures, with and without added carbon dioxide, were obtained. Of sixty cultures positive for *Br. abortus*, requiring added carbon dioxide on subculture, thirty-four grew in both Castaneda bottles on primary isolation, fourteen grew only in the presence of added carbon dioxide and twelve grew only in its absence. These results one might expect purely from chance.

*However, thirty-three of the thirty-five patients received some form of chemotherapy.

TABLE I. INCIDENCE OF VARIOUS SYMPTOMS IN CASES STUDIED

	Per Cent
Weakness	94
Sweats	89
Malaise	77
Anorexia	77
Chilliness	74
Headache	74
Backache	63
Chills	63
Pain in Neck	51
Joint Pain	31
Nervousness	31
Insomnia	31
Cough	23
Diarrhea	14
Abdominal Pain	11
Constipation	6
Neuralgia	6
Pleural Pain	3
Dysuria	3
Testicular Pain	3

TABLE II. INCIDENCE OF PHYSICAL SIGNS IN CASES STUDIED

	Per Cent
Fever	100
Lymphadenopathy	68
Weight Loss	51
Splenomegaly	43
Hepatomegaly	34
Abdominal Tenderness	11
Tender Spine	6
Neurologic Changes	6
Rash	3
Orchitis	3
Rales	3
Conjunctivitis	3
Rhinitis	3
Dicrotic Pulse	3

ning and approached normal by morning. A genuine undulant fever was recorded in only nine of the thirty-five patients. The average duration of fever was 3.2 months (range = ten days to fifteen months) in thirty-two patients.

Lymphadenopathy was present in the majority. Usually the anterior and posterior cervical as well as the axillary lymph nodes were enlarged. The nodes were seldom more than moderately enlarged and never showed evidences of suppuration. Occasionally epitrochlear and inguinal lymph nodes were notably swollen. There was palpable enlargement of the liver in one-third and of the spleen in nearly one-half of the patients. However, neither organ was massively enlarged in any patient. Tenderness of the liver was elicited in only four patients, and the spleen was tender in only one-fourth of the patients in whom it was palpable.

External evidence of weight loss was seldom apparent although half the patients lost weight. Only five of thirty-five patients lost 20 pounds or more. The lumbar spine was tender and stiff in two patients having spondylitis and radiculitis. One of these patients also had a positive Babinski reflex and a hemi-hypalgesia to pin-prick. Unusual manifestations included a maculo-papular,

BRUCELLOSIS IN MAN—HALL

TABLE III. INCIDENCE OF ABNORMAL LABORATORY FINDINGS IN CASES STUDIED

Abnormality	No. Patients	% Abnormal*	Range of Abnormality
Culture (<i>Br. abortus</i>)			
Venous Blood	35	100	
Sternal Marrow	12	83	
<i>Brucella</i> Agglutinins	35	100	Titer 1:160-1:5,120
Hemoglobin	35	0	<12.5 Gm.%
Leukocytes	35		
Total		80	3,000-7,999/mm. ³
% Lymphocytes		20	8,000-12,000/mm. ³
Erythrocyte Sed. Rate (Westergren)	33	52	40-70%
		48	20-39%
Granuloma		79	0-19 mm./1 hr.
Sternal Marrow	12	21	20-100 mm./1 hr.
Liver	4	83	
		75	

*Where several determinations were made, only the initial value was used in the tabulation.

generalized rash and a tender, enlarged testicle each in a single patient. Thrombophlebitis and pulmonary infarction led to an empyema with a bronchopleural fistula in one patient. This man recovered but required extensive thoracic surgery and had a chronic empyema remaining five years after the onset.

The incidence of the most significant laboratory findings is given in Table III. A positive venous blood culture was obtained in all of the thirty-five patients. The organism was found to have all the typical characteristics of *Br. abortus* in thirty-four patients. In one patient the organism lacked the requirement for carbon dioxide upon primary isolation but had the other characteristic of *Br. abortus*.^{*} Culture of sternal bone marrow also yielded *Br. abortus* in ten of twelve patients at a time when they had demonstrable bacteremia. Serial blood cultures were obtained at intervals for as long as six years. Demonstrable bacteremia persisted after the onset of symptoms for an average of 2.8 months (range = two weeks to thirteen months) in thirty-three patients.

Agglutinins for *Br. abortus* were found in the serum of all the patients in a titer of 1:160 or over. The median initial agglutinin titer was 1:640 but the initial titer was only 1:160 in three patients and was 1:5120 in one patient. Serial observations of the agglutinin titer were made in all patients. The maximum titer ranged from 1:160 to 1:5120 (Median = 1:1280). The persistence

of agglutinins is of considerable interest. In thirty-four patients adequate serologic studies were available following the acute illness. These studies indicated that agglutinins persisted in a titer of 1:160 or greater for over three months in twenty-four patients, over six months in twelve, over twelve months in four and over eighteen months in two. Where agglutinins were followed to near or actual disappearance, a titer of 1:160 or over persisted for an average of 9.1 months in eleven patients (range = two weeks to 4.75 years). In three patients agglutinins persisted in a titer of 1:20 or over for fifteen, fifteen and twenty-four months, respectively, despite complete disappearance of all symptoms, physical signs and bacteremia many months before.

There was no evidence of anemia in any patient. The initial leukocyte count was seldom elevated. It was 10,000 or more per cubic millimeter in only two of thirty-five patients (maximum = 11,500, median = 6,000 and minimum = 2,500). The proportion of lymphocytes to neutrophils was increased in every patient. The lymphocytes usually were small or medium in size and mature, although occasionally there were many immature leukocytoid lymphocytes in the peripheral blood. The erythrocyte sedimentation rate initially was normal in most patients, but it became markedly elevated in some. Stained sections of aspirated particles of sternal bone marrow showed granulomas resembling non-caseating tubercles in ten of twelve patients. Liver biopsies revealed similar granulomas in three of four patients. Serial liver biopsies also showed hemosiderosis and peri-portal fibrosis in one alcoholic bartender. There was no evidence of in-

*This strain grew in an atmosphere from which carbon dioxide was completely absorbed with solid KOH. It produced little H₂S and only moderate amounts of urease. Its growth was prevented by thionin but not by basic fuchsin. It was differentiated from strain 19 *Br. abortus* on methylene blue and thionin blue plates.²⁸

BRUCELLOSIS IN MAN—HALL

TABLE IV. RESULTS OF CHEMOTHERAPY IN CASES STUDIED

Drug	No. of Patients	No. of Therapeutic Courses	Dose per Day	Duration of Therapy	Results (by Therapeutic Courses)		
					Recovered	Relapse	
						Bacteriologic	Clinical
Sulfadiazine	1	3	6 Gm.	14-21 days	1/3	1/3	2/3
Streptomycin	3	3	2 Gm.	4-7 days	2/3	0	1/3
Sulfadiazine and Streptomycin	8	12	5 Gm. 0.5-4 Gm.	7-28 days 7-28 days	6/12	5/12	4/12
Chloramphenicol	5	5	2 Gm.	10 days	2/5	2/5	3/5
Terramycin	2	2	2 Gm.	4-21 days	1/2	0	1/2
Aureomycin	13	16	2 Gm.	7-21 days	9/16	2/16	7/16
Aureomycin and Streptomycin or Dihydrostreptomycin	6	6	2 Gm. 1 Gm.	14-21 days	3/6	2/6	3/6
ACTH	7	7	100 mg.	3-10 days	2/7	3/7	4/7

involvement of the kidneys in any patient although one had definite orchitis.

Results of chemotherapy in thirty-three patients are summarized in Table IV. Two patients received no specific drugs or antibiotics. A rather large number of therapeutic agents was investigated. Although the total number of patients was not large, certain facts soon became evident. Sulfadiazine was bacteriostatic *in vitro* and only moderately suppressive *in vivo*. Streptomycin was strongly bacteriocidal *in vitro* but often failed to be beneficial in human brucellosis.⁸ The combination of these drugs was more effective in experimental animal infections and in the human disease than either drug alone.^{9,21,22} Toxic effects of streptomycin, such as drug fever, drug rashes and vertigo due to damage to the eighth cranial nerve, were serious disadvantages.

Aureomycin has been thoroughly tested and has proved to be the best therapeutic agent for human brucellosis in our hands.^{2,20} It has been effective in suppressing symptoms, fever and bacteremia although some patients required more than one course before they recovered. No serious toxic reactions were observed although gastrointestinal irritation was troublesome in a few. Chloramphenicol and terramycin were used in a few patients. Chloramphenicol seemed slightly less effective than aureomycin but also produced fewer digestive disturbances. No hematologic toxicity was observed. Too few patients were given terramycin to permit valid comparisons. A combination of aureomycin plus streptomycin (or dihydrostreptomycin) was also studied in several patients after the method of Herrell and Barber.¹⁰

The results were no better than those obtained with aureomycin alone. Fortunately no serious toxic effects were observed, probably because of our conservative daily dose of streptomycin.

Recently seven patients have been treated with corticotropin (ACTH) given alone or just prior to a course of antibiotics. The results have been reported in detail elsewhere.^{1,19} Briefly, there was almost complete subsidence of symptoms and fever in spite of continued bacteremia as long as ACTH was given. Fever usually recurred as soon as the hormone was discontinued. No untoward effects were observed. Two recoveries were observed after ACTH alone; these may have been spontaneous.

Discussion

The diagnosis of human brucellosis is often difficult. The disease is most common in young men because of greater occupational exposure. It should be suspected in any febrile illness occurring in a packing plant employe, farmer or veterinarian. When a farmer is infected, it is worth while to examine all other members of the household since many unsuspected infections may be uncovered. *Br. abortus* may infect packing plant workers exposed to fresh pork as well as those coming into contact with beef only.¹⁴ Although they form only a small fraction of the total number of sick patients, the individuals whose infection can be traced only to ingestion of unpasteurized milk or dairy products serve to emphasize the necessity for pasteurization of such foods.

As shown in Table I the symptoms are seldom diagnostic. Taken together with the occupational

history, however, they may suggest the proper diagnosis to the experienced physician. The paucity of physical abnormalities (Table II) is striking; bedside examination of the patient alone never permits an unqualified diagnosis. The idea that an undulating, recurrent fever is the rule is not true; such a febrile course was present in only one-fourth of our patients. Some of the patients were afebrile for most of the duration of their disease. Only occasional patients had high fever and a severe illness. Complications such as orchitis, rashes and severe hepatitis were uncommon. The most frequent complication was spondylitis.

Skin tests with *Brucella* antigens have value in diagnosis in a febrile patient only if negative. A positive skin test does not indicate that an infection is necessarily active. The more widespread the disease, the less the value of skin tests. We do not believe they should be used except for epidemiologic studies because they often incite a confusing antibody response.

The most useful diagnostic tool has been the agglutination test. The tube dilution method has proved to be the most accurate available.⁷ The initial agglutinin titer of all the patients in this series was 1:160 or over (Table III). However, the long persistence of agglutinins (average = 9.1 months) at this level, in the absence of symptoms or other evidence of activity, casts some doubt on the value of *Brucella* agglutinins in this titer as a measure of activity. The cause for agglutinins persisting for many months remains unknown but chronic intracellular parasitism in lymph nodes, spleen and liver seems the most likely explanation.

The only absolute proof of diagnosis is the isolation of *Brucella* from the patient. For this purpose we prefer venous blood cultures using the Castaneda double medium bottle.⁴ Preferably three or more cultures should be obtained. Since the concentration of *Br. abortus* is low in the blood, if only a small amount of blood is submitted for culture, the organism may not grow. There does not seem to be any great advantage in using sternal bone marrow for cultures; in this series none was positive except in patients with demonstrable bacteremia. Bacteremia usually continues for less than three months with *Br. abortus* infections in human beings, although positive blood cultures were obtained in one patient thirteen months after the onset of his infection.

Presumably the infrequent occurrence of chronic bacteremia is due to the infrequent occurrence of suppurative lesions. Histologic studies of biopsies of sternal bone marrow, lymph nodes and liver confirmed previous reports that the inflammatory changes consist of non-caseating granulomas made up to epithelioid cells and occasional Langhans giant cells.^{11,23} In some patients liver biopsies showed considerable collections of mononuclear leukocytes in peri-portal areas adjacent to more or less well-defined granulomas. In one alcoholic patient serial liver biopsies showed considerable deposits of hemosiderin in bands of peri-portal connective tissue; there was no other evidence of hemochromatosis or cirrhosis of the liver.

Hematologic studies were helpful diagnostically. Leukocytosis was seldom seen even in the presence of complications. The prevailing pattern in the peripheral blood was a low or normal total leukocyte count with a relative increase in mature lymphocytes. Occasionally the appearance of numerous circulating leukocytoid lymphocytes together with fever, lymphadenopathy and splenomegaly caused some difficulty in differentiation from infectious mononucleosis.¹⁸ However, heterophile antibody usually was present only in low titer and was readily absorbed with guinea pig kidney. The erythrocyte sedimentation rate was normal more often than is the case in most bacterial infections but it was not a reliable diagnostic aid.

The therapy of human brucellosis has undergone a gradual evolution in the past ten years. At first no treatment was offered. Early in the past decade sulfonamides were used but proved disappointing. Streptomycin, which seemed so strikingly effective in the test tube, also proved to be of little value in patients. The combination of these drugs improved therapeutic results but at the expense of serious toxicity caused by the streptomycin. Chloramphenicol has been abandoned because the results obtained did not seem to justify the risk of serious bone marrow depression.²⁴ In our hands aureomycin has proved the best of the antibiotics. However, there has been a disturbing number of relapses and these have not been prevented by the addition of streptomycin or dihydrostreptomycin. These antibiotics suppress the infection, fever and bacteremia but these effects are often only temporary and the ultimate recovery of the patient seems to depend upon his inherent powers of resistance. Antibiotics prob-

ably fail to be curative because they fail to penetrate infected intra- and extra-cellular foci.^{16,17} Fever and toxicity can be controlled quickly with ACTH in spite of continued bacteremia. Thus ACTH may prove to be beneficial, when combined with antibiotics, for the treatment of the most severely toxic patients.

Since human brucellosis can nearly always be traced to an animal source, control of the human disease depends primarily on extermination of the animal reservoir. Pasteurization of milk and other dairy products is helpful but will not eliminate human brucellosis. Control of the disease in cattle, goats, sheep and hogs is a problem for veterinarians and public health officers, but the physician should be and is vitally interested. Whether vaccination, slaughter or quarantine of infected animals is the best policy may well depend upon local economic factors as well as the biology of the disease. Vaccination of human beings does not appear to be effective.

Summary and Conclusions

1. Thirty-five patients with brucellosis caused by *Br. abortus* were studied. Symptoms of the disease were multiple and varied. Physical findings usually were few and inconclusive.

2. *Br. abortus* was isolated from the blood of every patient. All had serum agglutinins ranging in titer from 1:160 to 1:5120. The diagnosis rested principally upon the epidemiologic and clinical history, the agglutination test and the blood culture. Only the last was decisive.

3. Aureomycin proved to be the most satisfactory therapeutic agent. There seemed to be no advantage in adding streptomycin or dihydrostreptomycin. Corticotropin (ACTH) controlled fever and toxicity but not bacteremia. Corticotropin may be a useful adjunct to chemotherapy in critically ill patients.

4. Control of human brucellosis rests upon pasteurization of dairy products and elimination of the animal reservoir.

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ANTIBIOTIC THERAPY IN BACTERIAL ENDOCARDITIS

III. Penicillin O and Hypoallergenic Penicillins in Treatment of Subacute Bacterial Endocarditis

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THE TREATMENT of subacute bacterial endocarditis occasionally is complicated by reactions caused by sensitivity to penicillin. In 1943, Lyons reported that reactions to penicillin in the form of urticaria occurred in 5.7 per cent of 209 patients. Simon¹⁵ stated that the incidence of all types of reactions to penicillin was approximately 7 per cent.

Evidence indicates that the incidence of sensitivity to penicillin is greater when large amounts of penicillin are used for long periods than when smaller amounts are used for shorter periods.⁶ In the treatment of subacute bacterial endocarditis, which requires administration of large amounts of penicillin for a relatively prolonged period, the problem of sensitivity to penicillin is apt to be more common than in treatment of other conditions. The problem is particularly serious in this disease, because without proper treatment, subacute bacterial endocarditis is a fatal disease.

The commonest type of reaction of sensitivity to penicillin is urticaria, which usually occurs from seven to fourteen days after administration of penicillin. Urticaria may occur much more rapidly in patients who have previously received penicillin. The urticarial reaction is usually temporary and does not necessarily recur if penicillin is given subsequently.

Penicillin also may cause an erythematous-vesicular eruption. This lesion most commonly occurs on the hands, feet and groin.¹⁰ Vesicular lesions may occur spontaneously in patients who have not received penicillin previously. It is considered that such patients have been sensitized by fungous infections of the skin.^{4,8} The erythematous-vesicular lesions should be regarded with caution because of the danger of subsequent exfoliative dermatitis.

The treatment of reactions induced by sensitivity to penicillin is difficult to evaluate because of the frequently temporary nature of the condition, especially the urticarial lesions. It is often found

that cutaneous lesions disappear even when use of penicillin is continued and that subsequent administration of penicillin to persons who have a history of sensitivity to penicillin may not cause any adverse reaction.

However, such reactions of sensitivity are persistent in some patients and may be refractory to one or more types of treatment. Nevertheless, when a potentially fatal disease such as subacute bacterial endocarditis is encountered, it may become almost obligatory to give penicillin. Various measures may be needed to combat these reactions of allergy. Unfortunately, no method is available to judge which method of treatment will be most successful in a given patient, so it is often necessary to be guided by the patient's history and to employ the several available methods of treatment by trial and error.

Simon^{13,14} reported excellent results in decreasing the incidence of such reactions to penicillin by use of preparations containing a mixture of penicillin and an antihistaminic. Injection of these preparations is said to be well tolerated. Administration of solutions of penicillin containing 0.5 per cent of 2-[α -(2-dimethylaminoethoxy)- α -methylbenzyl]-pyridine (decapryn) reduced reactions of sensitivity to penicillin from 6.5 to 2.4 per cent. When a 1 per cent solution of 2-[(2-dimethylaminoethyl)-2-thenylamino]-pyridine (histadyl) was added to penicillin, the rate of reactions was decreased to 0.5 per cent in a large series of cases, according to Simon. We have had no personal experience with these preparations.

Peck and his co-workers⁹ have shown that hypo-sensitization attained by administration of small amounts of penicillin, with gradual increase of the dose, may be successful in the elimination of reactions to penicillin. This procedure is time-consuming and may not always be effective; however, we have used it with success in several cases of endocarditis.

Recently, interest has turned to various "hypo-allergic" preparations of penicillin, such as penicillin O (allylmercapto-methylpenicillin). Reports

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concerning the effectiveness of these penicillins are conflicting. Siegal concluded that cross-sensitivity between penicillins O and G is the rule rather than the exception in patients who display persistent reactions. Volini and associates, however, used penicillin O in fifty-seven patients who had clinical symptoms of hypersensitivity to penicillin G; none of these patients showed untoward reactions to penicillin O. Adair and his co-workers stated that, "When therapy cannot be discontinued in the patient with a serious infection because of a hypersensitivity reaction, substitution of penicillin O for G can be considered a safe and beneficial procedure."

We are reporting the cases of three patients who had subacute bacterial endocarditis, who gave a history of sensitivity to penicillin G and who were treated satisfactorily with penicillin O. It will be noted that all three patients did manifest some reaction to penicillin O; however, it was considered that these reactions were much less severe than would have been expected with penicillin G on the basis of the patients' histories of previous reactions. Treatment in each of these patients was able to be continued to a successful conclusion.

Report of Cases

Case 1.—A forty-one-year-old white woman was admitted to the Mayo Clinic with a four months' history of daily fever as high as 102.4° F. (39.1° C.), night sweats, increasing fatigue, anemia and occasional chills. No previous history was present of rheumatic fever, rheumatic heart disease or a cardiac murmur. The onset of the disease had been gradual.

General examination revealed sinus tachycardia, minimal aortic insufficiency with a diastolic murmur at the aortic zone and a minimal apical systolic murmur. Cardiac size and rhythm were normal. Slight clubbing of the fingers was present and the splenic edge was just palpable.

Pertinent laboratory findings revealed mild anemia, an elevated erythrocytic sedimentation rate and microhematuria. Smear of the blood showed a few phagocytic reticuloendothelial cells and some toxic polymorphonuclear leukocytes. The leukocyte count was within normal limits. Two cultures of blood revealed the presence of *Streptococcus mitis*; this organism was inhibited by less than 0.05 unit of penicillin and by 1.5 micrograms of aureomycin per cubic centimeter of medium.

Because of a history of previous severe allergic sensitivity to penicillin G, the patient was given penicillin O and dihydrostreptomycin in combination. She received 300,000 units of penicillin O every three hours intramuscularly. Dihydrostreptomycin was given in doses of 0.5 gm. every six hours for a daily total of 2 gm. Triplelennamine hydrochloride (pyribenzamine) was given every six hours in doses of 50 mg. On the third day of

treatment a mild pruritic maculopapular cutaneous eruption was noted on the neck and arms. This began to clear up by the end of the next day. At this time the injections of penicillin, which had been given only at one site, were given in various extremities and at different locations. The next day great intensification of the pruritus and the maculopapular erythematous eruption occurred, together with the appearance of a rash over the buttocks, the posterior aspect of the thighs and, to a lesser extent, on the calves, forearms, face and neck. Administration of pyribenzamine was increased to every four hours and calamine lotion was used for the pruritus.

Administration of the antibiotics was continued despite the extensive cutaneous disturbance and finally the eruption began to subside. At the end of the fourteenth day of treatment the rash had cleared almost completely except for the tips of the third and fourth left fingers and one of the fingers of the right hand. These regions revealed whitish zones of dead skin. These zones became more numerous and coalesced, so that exfoliation of the skin of the hands eventually occurred. The patient responded well to this short term of combined therapy with penicillin and streptomycin. Follow-up studies twelve months later revealed that she continued to be well. No cutaneous tests for sensitivity to penicillins O or G were performed and no penicillin G was given either during or after treatment with penicillin O.

Case 2.—A seventy-four-year-old white man was admitted to the clinic with a five months' history of anorexia, easy fatigability, loss of strength and weight, mild arthralgias and low-grade fever, which on occasion was as much as 103° F. (39.5° C.). Six months before the onset of these symptoms the patient had undergone transurethral prostatic resection. A diagnosis of subacute bacterial endocarditis had been made at home. The organisms that had been isolated were thought to be nonhemolytic streptococci, which were found to be resistant to all the more commonly used antibiotics except chloramphenicol (chloromycetin). He had been treated with 3 gm. of chloromycetin per day for four weeks without success. Use of penicillin had been followed by extensive reactions resembling exfoliative dermatitis over several parts of the body. The patient had been advised never to have penicillin again.

General examination showed questionable petechiae on the buccal mucosa. The blood pressure was within normal limits, as was the cardiac rate; cardiac rhythm was normal. The heart was not enlarged. A loud systolic murmur was heard at the aortic and mitral zones and was loudest at the apex. The prostate was enlarged. No clubbing of the fingers or splenomegaly was noted. The patient did not look ill.

Results of laboratory examination disclosed mild anemia, elevated erythrocytic sedimentation rate and microhematuria. The total leukocyte count and a differential count were normal. No phagocytic reticuloendothelial cells were noted in smears of blood. Values for blood urea were within normal limits; a roentgenogram of the thorax revealed nothing abnormal. Three cultures of the blood disclosed micrococci, the species of which was undetermined. Studies of sensitivity revealed that

this organism was inhibited by 1.6 units of penicillin per cubic centimeter of medium. It was not inhibited by more than 50 micrograms of aureomycin, terramycin or chloromycetin, or by more than 100 micrograms of dihydrostreptomycin per cubic centimeter.

Because of the great resistance of the organism to most antibiotics and its relative sensitivity to penicillin, and because of the history of prior hypersensitivity to penicillin G, it was decided to treat the patient with penicillin O. A total of 900,000 units of penicillin O in divided doses was given on the first day. This amount was increased to 2,000,000 units the next day; daily treatment with this amount was continued. On the third day of treatment, mild erythema and edema associated with slight pruritus appeared in the inguinal regions and the upper parts of the thighs. These conditions subsided in two days even though treatment was continued, but some scaling of the superficial layers of the skin occurred during the next few days in these regions. After seven days the daily dose was increased to 4,000,000 units and was continued at this level for sixteen days. On the fifteenth day of treatment, intramuscular administration of procaine penicillin G was begun in small doses; the daily dose was gradually increased until 5,000,000 units of this form of penicillin was given per day. Then penicillin G was given by continuous intravenous drip, at first in small doses and then in increasingly larger amounts until a total dose of 10,000,000 units per day was being given in this manner. This amount was administered daily during the last nine days of treatment. Dihydrostreptomycin in amounts of 2 gm. per day for the first two weeks in divided doses and 1 gm. per day for the remainder of the period of treatment was also used. In addition, the patient received 50 mg. of pyribenzamine every six hours during the first two weeks of treatment. Administration of probenecid (benemid) in doses of 0.5 gm. four times a day was instituted in an attempt to enhance the concentration of penicillin in the blood.

The duration of treatment was thirty-six days, during which a total of 183,500,000 units of penicillin and 49 gm. of dihydrostreptomycin was used. The patient responded well to this program except for a mild psychosis induced by fatigue and exhaustion for several days; this disappeared before treatment was terminated. Follow-up studies in this case after an interval of some months indicated that the patient was well and working.

Case 3.—A fifty-eight-year-old Negro was admitted to the clinic with a six months' history of malaise, easy fatigability, recurrent arthralgia involving the shoulders, sweats, chills, fever and loss of weight. During the three months prior to admission he had experienced a chill almost daily, together with a fever as high as 104° F. (40° C.) and diffuse sweating.

General examination disclosed evidence of recent loss of weight. The heart did not appear enlarged. A minimal systolic murmur was present at the cardiac apex; sinus tachycardia was noted and the blood pressure was 120 mm. of mercury systolic and 75 diastolic. No clubbing of digits or splenomegaly was present.

Results of laboratory examination disclosed severe anemia, the value for hemoglobin being 6.8 gm. per 100

cc. of blood; the leukocyte count was normal and a differential count disclosed 87 per cent polymorphonuclear leukocytes. The erythrocytic sedimentation rate was 98 mm. at the end of the first hour (Westergren method). The value for blood urea was increased. Urinalysis showed albuminuria, microproteinuria and hematuria. Two cultures of the blood disclosed the presence of *Streptococcus mitis*. Results of tests for sensitivity revealed that the organism was inhibited by 0.1 unit of penicillin, by 1.5 micrograms of terramycin and by 3.1 micrograms of aureomycin per cubic centimeter of medium.

Because of a history of previous reactions to penicillin G and because of the unavailability of penicillin O at the time, administration was begun of 3 gm. of terramycin and 1 gm. of dihydrostreptomycin per day in divided doses. Additional studies *in vitro* after treatment was started disclosed that terramycin alone had only slight bactericidal action and that the organism was not inhibited by more than 100 micrograms of streptomycin. A combination of terramycin and dihydrostreptomycin did not show enhanced bactericidal activity. Penicillin and terramycin together did not show increased effectiveness; indeed, this combination showed less bactericidal effect than did penicillin alone. Penicillin and streptomycin on the other hand did exhibit greater killing power than did penicillin alone. Despite this additional information it appeared advisable to continue use of the combination of terramycin and dihydrostreptomycin and to avoid use of penicillin G.

Treatment was continued for fourteen days and then stopped. The patient's temperature, which had been 103° F. (39.5° C.) before treatment was started, decreased to normal two days after onset of treatment. Cultures of blood failed to reveal any organisms and the patient was considerably improved symptomatically. Two weeks after treatment was discontinued the temperature increased and chills reappeared; cultures of blood made at this time again disclosed streptococci. Studies of sensitivity at this time revealed that the organism was inhibited by more than 6.2 micrograms of terramycin, 0.8 unit of penicillin, 6.2 micrograms of aureomycin and 25 micrograms of streptomycin per cubic centimeter of medium. The patient was then given from 600,000 to 3,000,000 units of penicillin O per day; it was given intramuscularly every three hours in divided doses. After the first dose of penicillin O, urticaria developed in the left lower eyelid and at the base of the left side of the neck. Diphenhydramine hydrochloride (benadryl), in a dose of 100 mg., was given; use of penicillin O was continued. After the fourth injection of penicillin O, the onset of mild redness, swelling and tenderness was noted in the terminal portions of all the fingers of both hands. These reactions had occurred after previous use of penicillin G and had been so alarming that the family physician had warned against further administration of penicillin. By the next morning the cutaneous lesions had disappeared and use of penicillin O was continued in larger daily doses without further reactions.

Dihydrostreptomycin was given as before. This schedule of treatment was continued for eleven days. Then

procaine penicillin G in daily amounts of 3,600,000 to 4,800,000 units was administered along with dihydrostreptomycin. Finally, penicillin G was given by continuous intravenous drip, the daily dose averaging about 10,000,000 units; use of dihydrostreptomycin was continued. The patient received a total of 650,000,000 units of penicillin, 83 gm. of dihydrostreptomycin and 27 gm. of terramycin. Numerous cultures of blood obtained during the period of treatment failed to reveal organisms. Subsequent follow-up information revealed that the patient was well one year later.

Comment

Because reactions of sensitivity to penicillin are frequently temporary and fluctuate greatly, it is not possible to state dogmatically that these patients could not have been treated initially with penicillin G. However, because of the history of previous severe reactions to penicillin G, it was considered unwise to give this preparation at the onset of treatment. The considerably milder nature of the reactions with penicillin O indicates that the latter form of penicillin was of benefit in the treatment of these patients.

One can only speculate concerning the type and severity of the cutaneous reactions that might have developed in these three patients had they been given penicillin G initially. In the first case, the extensive erythematous maculopapular rash had begun to clear by the end of the fourteenth day of combined therapy with penicillin O and dihydrostreptomycin, but exfoliation of the skin of the fingers and hands was beginning to develop. Appearance of this reaction sooner or a longer period of treatment would have necessitated cessation of treatment with penicillin in this patient. It was considered that successful short-term treatment with penicillin O in combination with dihydrostreptomycin³ enabled us to eradicate the infection; this might not have been achieved if it had been necessary to use either penicillin G or penicillin O alone or in combination with streptomycin for the conventional period of treatment of four to six weeks. In the second case, the exfoliative reaction that occurred with penicillin O was considerably milder than that after previous use of penicillin G and it cleared up in several days while treatment with penicillin O was continued. In this case also, it was considered that successful therapy was possible because of the use of penicillin O, particularly in view of the fact that the organism was extremely resistant to all the other more commonly used antibiotics. In the third case, the reaction to pen-

icillin O was considerably less severe and more transient than that seen after use of penicillin G. After failure of combined treatment with terramycin and dihydrostreptomycin, it was still considered hazardous to start with penicillin G; therefore penicillin O was substituted with good results.

It is evident that cross-sensitivity was present between penicillins O and G in all three cases; however, penicillin O apparently caused relatively mild and transient reactions. While it is evident that penicillin O is not the final answer to the problem of sensitivity to penicillin, it offers one more approach to the treatment of patients who have subacute bacterial endocarditis, who are sensitive to penicillin G and in whom use of penicillin is indicated.

In the treatment of a potentially fatal disease, such as subacute bacterial endocarditis, it is valuable to have available several methods of treatment to combat sensitivity to penicillin. Given a patient in whom a diagnosis of endocarditis is established and who presents a history of sensitivity to penicillin, the physician may approach the problem of therapy with the following thoughts:

1. If the history is that of a mild urticarial or erythematous-vesicular eruption, one may begin with conventional treatment and give antihistaminics when the reaction of sensitivity manifests itself. As was done in the three cases we have reported, administration of antihistaminics may be started at the onset of therapy.

2. If a history of moderately severe cutaneous reactions is present, one may begin treatment with a combination of antihistaminic and penicillin in solution given by the continuous intravenous route, as suggested by Simon.

3. Penicillin O may be used, with or without addition of an antihistaminic.

4. If these forms of treatment are of no avail, then one can test the sensitivity of the isolated organisms to the other commonly used antibiotics and to combinations of antibiotics, in a search for synergistic bactericidal effects. In the rare case in which penicillin cannot be used, it may be possible to eradicate the infection by use of another antibiotic or combination of antibiotics that has been demonstrated to be of value by studies *in vitro*. Occasionally it is possible to use successfully one of the bacteriostatic agents, such as terramycin or aureomycin, either alone or in combination with dihydrostreptomycin or other anti-

biotics.^{6,11} However, experience has indicated that use of such bacteriostatic agents, either alone or in combination, is of limited value in the treatment of bacterial endocarditis.²

5. If all these methods have failed, one must resort to the costly and time-consuming method of hyposensitization to penicillin. This phase of the problem has been thoroughly reviewed by Siegal.

Summary

Three patients who had subacute bacterial endocarditis and who presented histories of previous severe reactions of sensitivity to penicillin G were successfully treated with penicillin O. All three patients manifested mild reactions of sensitivity to penicillin O; these reactions were insufficient in degree to warrant cessation of administration of this form of penicillin.

Penicillin G was administered subsequently in gradually increasing doses in two of these three cases without any untoward reactions. Antihistaminic drugs were used in all three cases in an attempt to minimize the extent of reactions.

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CAR DEATHS COST LIFE INSURERS \$69 MILLION

Automobile fatalities brought 39,000 life insurance death claims in 1952, representing aggregate payments of \$69,000,000 in the year, the Institute of Life Insurance reports.

The life payments stemming from motor vehicle deaths in 1952 were very nearly as great as all life insurance death benefit payments annually for all causes of death in the late '90s, the Institute said.

"While the dollar cost is purely incidental to the personal tragedies involved, it does stand as a warning

of a huge public loss, even when insurance payments are made," the Institute commented.

Life insurance purchases in the United States in 1952 set an all-time record, it was reported by the Life Insurance Agency Management Association.

Life insurance purchases in the United States in January were 16 per cent greater than the volume in the corresponding month of last year, and were at a record level for January.

A LOOK BACKWARD

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MY FRIENDS in the Academy:

There are ordinarily two happy moments surrounding election to High Office. First, as one contemplates with pride the esteem of his colleagues which placed him there, and then when he is relieved of the responsibilities of the office. You have shown me previously many evidences of your affection, a sentiment which I reciprocate and for which I am very grateful. You have placed me greatly in your debt. And now that I am about to join that group of distinguished past presidents of this Academy, I want to acknowledge with a sense of pride this additional mark of your confidence. Life often rewards us many times beyond our true merit. As I stand before you now with "emotional knees," I have only one claim upon you—and that is one of profound gratitude for your kindly acceptance of me.

Much of what happens to us in life is accident: Who our parents are; where we grow up; who our associates are; who our teachers are; under what influences or spells we come, and a host of other considerations which determine in an important manner the fate of any one of us.

My appearance before you tonight is in the real sense an accident. I never wanted to be a doctor. The reasons, whatever they were, seemed very real to me then. My father was a small town business man in a village in Western Minnesota in the Red River Valley, and we lived on a farm on the edge of the village. My only ambition was to be a farmer. Living close to nature, surrounded by a host of living and growing plants and creatures filled me with a sense of the joy of living, of being useful and of being a part of an important scene. It is still a pleasant dream! However, my father had other plans for me. He was intrigued by my anxiety over sick animals, horses, cows, and pigs alike. My only concern was for them.

A number of years ago—in 1926, I believe it was—Ray LaVake asked a number of us to tell at a Nu Sigma Nu banquet what the resolution of forces was which led us to become doctors. To

a few of you, therefore, my story is repetitious. But I repeat it here only to emphasize the point that what we are and do is often in large measure mere accident. One spring, while I was still a student in High School, we had on the farm about fifty sows that could not farrow their young. The first two sows with their unborn litters we lost while waiting, on the advice of our veterinarian, "for nature to take its course." I scurried through the *Breeders' Gazette*, *The Farmer*, and several books on the veterinary problems of the farmer which occupied a row on our modest book shelves. A snaring apparatus procured through the advertising columns of one of these journals proved useless. Much to my amazement, I found my own hand the best instrument to deliver these pigs. The effort cost me about three weeks of school, for as those of you who have had obstetrical experience know, these obstetrical assignments are time consuming, especially for multiple births. For me it was a task that had to be done. I can still feel, after these many years, the warmth of my father's sense of pride in the accomplishment. Three years in college went by before I capitulated to my father's plea to have a go at medicine. That last summer on the farm, during World War I, when help was very scarce, it fell to my lot to haul manure every day during a hot spell of weather for a period of about three weeks between haying and harvesting. Well, it was too much. Anything, I thought, would be better than this! So through the portals of pigs and manure, I come before you tonight.

And what a thrilling experience it has been to be a doctor! You, who have thoroughly enjoyed the experience such as I have, know whereof I speak. I retell this story for another reason—to emphasize the great influence which the ferments of time and experience work silently upon our minds and outlook. That which we reject in adolescence, we come with more experience not only to accept, but to embrace. Our language stands in need of a good word to connote this transition from rejection to acceptance. How the interaction of a number of forces can be influenced favorably to bring such conversions about is probably one

Presidential Address, presented at the Minnesota Academy of Medicine, January 14, 1953.

of the most important problems of education. From my own experience, I would say that the most helpful catalyst other than time, in this complicated chemical reaction, is work. Happy and fortunate is that man upon whose shoulders the yoke of work fits comfortably! Work matures the adolescent mind. It soothes the troubled mind, and is the best balm for the abrasions and trials of life. If work is the curse of heaven, how sweet can its blessings be?

1887

Almost sixty-six years have elapsed since the founding of this Academy. In that very year (1887), Edward Bellamy wrote his famous Utopian novel, "Looking Backward," in which he depicted life in America in the year 2000. It has been said that, of books published in the last twenty-five years of the nineteenth and the first twenty-five years of the twentieth century, Bellamy's "Looking Backward" has had more influence on the progress of thought than any other book, save "Das Kapital," by Karl Marx. Forward looking and imaginative as Bellamy's book was, accomplishment has exceeded Bellamy's most startling of many clairvoyant prophecies on all scores, save that of human behavior. The "Rosebush of Humanity" which was to grip the peoples of the world in a warm glow of fraternity and love of his fellow man, such that war would cease to exist and thereby make standing armies and navies unnecessary—that rosebush still remains a figment of the imagination, expressed now and then in the buoyant and expectant hopes of many peoples who would like to believe that the differences which separate people can be resolved by means other than war. The echoes of the battles of words coming from the conclaves of the representatives of governments where we believe these issues should be resolved peacefully tell us plainly that there, too, as in most spheres of human activity, a relentless struggle for advantage and the upper hand is continuously in progress. Recourse to dialectics never was and never will be the pass-key to salvation in any endeavor. We must look to devices more promising than words before the "Rosebush of Humanity" can awaken the sympathies and still the combativeness of man such that man will come to believe that his own welfare and that of all peoples is dependent upon a spirit of co-operation, mutual helpfulness and trust.

The First Meeting of the Academy

The first meeting of the Minnesota Academy of Medicine was held at the Ryan Hotel in St. Paul on November 5, 1887. The transactions of the meeting were published in the November 15 issue of the *Northwestern Lancet*, the forerunner of the present *Journal-Lancet*.

We are told in an editorial comment on that meeting by the editors, Alex J. Stone and William Davis (Associate Editor), that approximately thirty-five of the forty men made members in two previous organizational meetings were present. They also commented as follows:

"It is a humiliating confession of the superiority of body over the mind, that no medical society having frequent meetings can hope to keep alive the interest of its members, unless it furnishes something in the way of a supper at its gatherings. The Academy recognizes this fact, but it seems to us it is rather inclined to overdo the matter, if the spread furnished at the Ryan is a sample of what is to be expected at the meetings."

The editors then went on to suggest that they regarded it as preferable to reverse this order of things and to have the scientific papers read before the repast.

During the twenty years that I have been privileged to be in attendance at these meetings, I must say the Academy and the Town and Country Club have collaborated to provide a friendly atmosphere and to serve dinners of a rare quality which have left a wonderful relish on our mental palates that has survived long beyond the mere enjoyment of such nice occasions.

John F. Fulton, the first president of the Academy, delivered his inaugural address on the occasion of the first meeting—a procedure which has been reversed such that the president now finds it his duty to try to say a few words appropriate to the occasion when he leaves the stage rather than when he first comes on. This arrangement can be a source of real comfort to the speaker, for no one expects any evidences of serious thought in a swan song. In Kansas, the State bird is the mythical Jayhawk, which is said to fly backward, because it is more interested in where it has been than where it is going. Now, I presume, the only survivor of this professed greater concern for the past than for the future is typified in the addresses of retiring presidents of professional and scientific organizations. Inasmuch as the incoming president of this Academy is known

to all the members a year in advance, a return to the original plan of having the president look ahead rather than back might bring the presiding officers to a fuller realization of their important responsibility. In any case, let me say that I wish I could feel that someone happening upon the pages of this presentation sixty-six years hence could reread these lines with a fraction of the pleasure with which I perused the forward-looking and stimulating paper of Dr. Fulton. It was a worthy inaugural for an organization which survived the pains of birth and has now come of age.

The other paper of that first meeting of the Academy was read by George F. French and dealt with the sexual problems of uncongenial marriages from the standpoint of the female. Ten persons participated in the discussion, all distinguished names of their day and well-known to most of us. Interestingly enough, a good share of the discussion hedged about the ills and prevalence of masturbation in the female, a subject that most physicians now are content to ignore, or when it needs attention to direct to the psychiatrist, the only person believed to be urbane and erudite enough to handle a subject of such delicacy with any suggestion of competence.

Thereafter for long years the Academy met alternately at monthly intervals, save for the summer season, at the West Hotel in Minneapolis and the Ryan Hotel in Saint Paul. In May, 1900, the meeting place was changed to the Minnesota and the Minneapolis Clubs. Subsequently, meetings were held at the Commercial Club in Saint Paul and the Minneapolis meetings returned to the West Hotel. In February, 1907, meetings were renewed at the Minnesota and the Minneapolis Club. Since the April meeting of 1911, with few exceptions, the Academy has continued to meet at the Town and Country Club.

On the occasion of Osler's visit to the Twin Cities in October, 1902, Osler also addressed the Academy. The subject of his address was "License to Practice" and the meeting was held at the State Capitol in the Hall of Representatives because of the larger meeting place and the interest of legislators in Medical Practice Acts. It probably should be said here that when Osler spoke on the Campus, President Northrop had to discourage student attendance at the lecture. How times have changed since then! Lectures on the Campus now, even by men of national promi-

nence in medicine, are attended often by only a thin smattering of medical students. It is even problematic whether the announcement of a lecture by Kinsey on the vagaries of sex behavior would draw the students out to an extracurricular exercise. These reactions on the part of students are difficult to understand. What is required, they will do, but there appears to have been since World War II a growing apathy on the part of students toward unassigned tasks. It is not a healthy sign.

In 1887, when the meetings of the Academy began, it was ten miles between the populated borders of the Cities. Transportation was by train or by horse and buggy. Whereas a horse-drawn Street Railway system had been operated in both cities since 1875, it was December, 1889, before the first line was electrified, a process which was not completed for all the lines until 1892. The first inter-city line became operative in 1890.

How times have moved on since then in means of communication and travel! That our traffic problem still needs study and improvement, I believe all of us will concede freely.

Awakening of Interest in Medical Education

The first meeting of the Academy took place about two years before the beginnings of the Medical School of the University of Minnesota. The year our Medical School opened its doors (1889), a more significant event for greater Medicine occurred in Baltimore with the founding of the Johns Hopkins Hospital. With the aid of John Shaw Billings, Librarian and founder and builder of the Surgeon-General's Catalogue to medical literature, Daniel Coit Gilman, President of Johns Hopkins University, began the task of building a strong Medical School Staff. That departure from current practice in looking beyond the local scene for talent with which to fill the important posts in Medical Schools, has come to have great importance for Medicine in this country. C. W. Eliot, President of Harvard University, had begun as early as 1870 the renovation of the existing proprietary scheme of instruction, by which the Faculty pocketed the tuition fees. Two interesting letters of this period from Oliver Wendell Holmes to his friend, Motley, depict the opposition of the Faculty to these suggested innovations. Holmes' sympathies too were on the side of the Faculty. He characterized Eliot's efforts at reorganizing the Medical

School as flopping it over like a flapjack in topsyturvy turmoil. Eliot won out and reorganized the Faculty on a true University basis, incorporating the Medical School as an integral part of Harvard University. Though carrying the name, the Harvard Medical School was, in reality, and had been since 1810, a voluntary proprietary organization, running its own affairs. Harvard University having no hospital of its own was, of course, unable to effect such sweeping changes as Gilman had set in motion at Hopkins. Presently, however, the movement of house-cleaning in the medical schools was in full-swing, and shortly after the publication of Abraham Flexner's report (1911), unmasking the existing deplorable condition of most medical schools in the country, the proprietary schools began to disappear. A reorganization of our own Medical School began with the coming of President George Edgar Vincent in 1911, and between 1914 and 1917 the plan of having all full-time teachers in the preclinical sciences had been completed. At the very same time at Johns Hopkins, the plan of having all the Heads of the Clinical Departments on full-time had been initiated—a plan that set the pattern for all medical schools in the country, and one which has now become standard practice in most of them.

An Exciting Period

There probably has been no more exciting period in the history of medicine than the years which saw the founding of this Academy. The battle of words over the contagiousness of puerperal fever had been fought and won, though even this victory failed to connote to the profession the great importance of the work of Pasteur (1862) and Lister (1867). When Lister came to this country to the first Centennial celebration in 1876, his reiteration of the importance of the antiseptic principle in surgery fell upon unprepared minds. In any case, when President Garfield was shot in 1881, the frequency with which his wounds were probed by many well-known surgical consultants, without any allusion to employment of Lister's antiseptic methods, suggests that Lister's teachings had fallen on deaf ears. Certainly all of the Consultants must have read some of Lister's papers and some of them must have heard his oration in Philadelphia at the time of the Centennial. All of which goes to indicate that the transference of knowledge from one area

of learning to another is rarely, if ever, an overnight phenomenon. The ready acceptance of anesthesia by the entire medical world is, of course, a notable exception. And the more recent success of the sulfonamides with phlegmonous inflammations had prepared the way for ready acceptance of penicillin. Moreover, use of the experimental method in these latter researches lent simultaneous incontrovertible proof of the protection afforded by these antibiotics.

By 1887, when this Academy came into existence, the science of Bacteriology was well on its way. The cause of a host of bacterial diseases had been resolved. Meaning and understanding suddenly seemed to have penetrated into the aura of confusion which enveloped most diseases. Every physician lived in an atmosphere of hopeful expectancy. The discovery of the cause of many baffling affections was being made several times a year. With the employment of new techniques, the mysteries of the unknown in medicine were being probed with more success than had attended the efforts of countless observers over more than twenty centuries. The veil of despair was being lifted. There were evidences on the horizon of restoration of public confidence in medicine. For the first time in history, medicine became the recipient of magnanimous benefactions and bountiful philanthropy. Little wonder that Fulton, in his inaugural dissertation, was prompted to assert that abdominal surgery has been placed upon a basis of scientific accuracy.

Leeching and Blood-letting Still in Evidence

Still, all the useless therapeutic devices of the past had not yet been given up. John Ashhurst, editor of the *International Encyclopedia of Medicine and Surgery*, writing of the treatment of intestinal obstruction, said in 1886:

"I have no hesitation in saying that the remedy of prime importance is direct depletion by blood letting. I would have no hesitancy in using it if leeches could not be procured. I have seen the whole aspect of a case changed by the application of leeches immediately over the inflamed aspect of the bowel. If the patient is a vigorous adult, at least 12 ounces of blood should be taken away. . . . After leeching, the whole abdomen is covered with mercurial ointment and a warm mush or hop poultice, then applied over all."

The poor hereditary background of the surgeon, as represented in part by the modern barber pole, together with observations of his sanguinary

practices at operation, would appear to justify the disparaging reference of leech, which even nowadays is occasionally applied to surgeons. But let it be remembered that in the John Wycliffe Bible of 1382, St. Luke admonished, "Leech, heal thyself." Now, you and I know from an acquaintance with the King James version of 1611 that this allusion was to physicians!

A century before the birth of this Academy, the attitude of John Coakley Lettsom, one of the founders of the Medical Society of London, toward blood letting was stated in this well-known doggerel—

"When people's ill, they come to I,
I physics, bleeds and sweats 'em;
Sometimes they live, sometimes they die,
What's that to I? I lets 'em."

There is little evidence that the practice or its justification in such terms, increased the confidence of the public in the Medical Profession.

And if one scans the medical texts of John Ashhurst's day, it will be found that leeching and bleeding were still being advised for a number of disorders. In 1892, the very year in which Osler presented on the Campus of the University of Minnesota his memorable address on "Teacher and Student," the first edition of his great textbook, *Principles and Practice of Medicine* appeared. In it, Osler said concerning blood letting: "The reproach of Van Helmont that 'a bloody Moloch presides in the chairs of medicine' cannot be brought against the present generation of physicians. During the first five decades of this century, the profession bled too much, but during the last decades, we have certainly bled too little. Pneumonia is one of the diseases in which a timely venesection may save life." This indication for phlebotomy was still to be found in the eighth edition of the same text, which the medical student of my day read. Napoleon once remarked that there are evidences of Charlatanism in every age. The next generation will probably find palpable evidences of its survival well into our present period. And on that score the advice of a brother physician of nineteen centuries ago is worth heeding. Said Luke: "Thou hypocrite, cast out first the beam out of thine own eye, and then shalt thou see clearly to pull out the mote that is in thy brother's eye." Mote and beam in the Revised Standard Version of the Bible have become speck and log. Though with a ring of less

eloquence, let us hope that this restatement of the metaphor may come to have increased meaning for its readers.

More than twenty years were to intervene beyond the founding of this Academy, before the transfusion of blood came to supplant phlebotomy. It is only in our own day that we have come to appreciate fully how complicated a scientific procedure the transfusion of blood can be. And refinements and improvements are being added continually. Such is the history of all progress!

Vital Statistics

The story of the birth of Christ tells us that the Romans had their registries for the recording of the census. There is no evidence of a regular system of registration of births, marriages and deaths prior to the institution of the practice in Geneva in the middle of the sixteenth century. Lord John Russell introduced a plan for the registration of vital statistics which the British Parliament enacted as law in 1836. Massachusetts began its scheme of registration of vital statistics in 1842. In the recording of the seventh federal census in this country in 1850, the first attempt was made to obtain figures on mortality for all the States in the Union. Minnesota, together with New Mexico, Oregon and Utah, were then still listed as Territories. Minnesota became a State in 1851. This interesting report was prepared under the direction of J. O. B. DeBow, Superintendent of the Census, and was published in 1855.

The "Zymotic" diseases were responsible for 40.8 per cent of the deaths in the 1850 census. Diseases of the respiratory system stood second in importance, being responsible for 16.9 per cent of the total mortality. Consumption, as such, was not mentioned by name. However, tuberculosis and pneumonia undoubtedly were the large contributors. Cholera, dysentery, fever, typhoid fever, scarlet fever and croup in that order were the most frequent causes of death listed under zymotic diseases. And in the new Blakiston edition of Gould's Medical Dictionary of 1949, the word zymotic is not to be found! And the threat of these diseases disappeared long before the word.

Geography and Disease

The year before this Academy came into being (1886), a Report on the Mortality and Vital Statistics of the United States came into print

from the Government Printing Office at Washington under the authorship of John S. Billings, Surgeon of the United States Army. It was a compilation derived from the tenth census of 1880. The text contains many maps in color depicting the importance of geography upon mortality and the incidence-location of fatal diseases. As we examine these interesting maps now, it is quite apparent to anyone that many factors had to do with the reported incidence of these diseases. But probably more important than any other consideration for us is to recall now that, in the main, geography had little, if anything, to do with these diseases. All of them like tuberculosis, diphtheria, scarlet fever, typhoid fever, and a host of others were found to have specific causes. In only a few diseases, typified by malaria, have geographic studies been of primary importance in tracing down the actual causative agents. At best, such differences in geographic distribution are only suggestive. Ultimate causes must be sought in the more critical areas of thinking and research. Those who are presently enamored of the importance of geography in the study of cancer might well study these maps compiled by the Bureau of the Census in 1886.

Suggestions of Strife Between Specialists and General Practitioners Are Not of Recent Origin

"The chief objection brought against specialties is that they operate unfairly against the general practitioner in implying that he is incompetent to properly treat certain classes of disease and narrowing his field of practice." Lest some of you conclude that this was a recent expression from a member of the Academy on General Practice, let me hasten to add that this statement was contained in a Report of the Committee on Specialties of the American Medical Association published in the transactions of their Journal for 1869. It is obvious therefore that long before the beginnings of this Academy there was a feeling of competition between those who professed to be Specialists and those who accepted the role of General Practitioners.

We see about ourselves everyday evidences of a regimented society. Every Utopia reveals unmistakable traces of such regimentation. There is no Heaven without a Hell; no State in any era of civilization or in any projected Utopia

without its prisons, hospitals and almshouses. Such has always been the condition of society. Regimented as we are today, I know of no imaginary Utopia in which the individual enjoyed as much freedom as we have today. We who are privileged to live here in America need to recount our blessings frequently.

Medicine could not deliver a good brand of medical practice to the public today without a large number of General Practitioners. Will that be the situation in the year 2000? Who can tell? I have the impression that if there were available now an adequate number of places for satisfactory training in all the specialties of medicine and surgery, which training would be fully acceptable to Boards which are authorized to pass judgment upon the adequacy of such training—if such places of training were to become generally available, I could well believe that the clinic idea to which the Brothers Mayo lent such great impetus might well become the standard condition of practice throughout our country. I am inclined to believe that if such training areas were available that the idea of broader specialty training might find acceptance with both the public and physicians. However, only time will tell. It certainly is not a development that can come about readily.

The Medical Profession needs to work out for the welfare of the public, as well as for its own good, happier existing relationships between General Practitioners and Specialists. Obviously, there may have to be some give and take on both sides. What is best for the public will eventually prevail, and in the long run is best for medicine too. The General Practitioner is usually the first contact of a patient with the Medical Profession, and properly so. He is medicine's first-line consultant. He must be prepared to assume some responsibility for every type of illness.

The patient and the public sometimes view with alarm early contact in an illness with a Specialist. The public is inclined to believe, on the basis of earlier experience, that the Specialist is too narrow and myopic in his views; that he is too inclined to assess the patient with high-powered lenses in his own field of interest, screening all other areas out of focus. Specialists probably do better on this score than in earlier years, but in general the criticism is still valid. Very few Specialists deserve the term of Physician in a limited domain. Cultivation of a universal focus of interest on all functioning parts of the patient's anatomy is not

easily achieved by any physician, no matter what his profession of interest is.

The Academy

Academy is a spirited word. Ever since Plato taught in the olive groves of Acadame, Academy has come to be synonymous with the cultivation of learning. Distinguished societies have adopted the name. In Europe, particularly in France, Academies of Literature, Arts and Sciences, as well as in the special provinces of Learning, came early to typify an interest in scholarship at the highest level. Milton in his well-known tract on education, conceived of an Academy as something intermediate between a University and a College. In our country, an Academy has come to be synonymous with a school of instruction. The only survivals in our telephone book listed under the title are an Academy of Accountancy and another where the art of horseback-riding is taught.

The New York Academy of Medicine

The New York Academy of Medicine celebrated its first Centennial in 1946. Many of you are undoubtedly familiar with the excellent volume by Philip Van Ingen, published by the Columbia University Press in 1949, setting forth the History of that Academy. From small beginnings, the New York Academy of Medicine has come to exert an important influence on medicine in this country. It has the largest medical library in the United States next to the Surgeon General's and it probably serves more readers than any other medical library in the world.

The membership of the New York Academy of Medicine is in the area of 2,400. Its annual income from dues in 1946 was \$88,000. Yet this organization has an endowment of \$4,000,000, and an annual income of more than one-third of a million dollars each year. In the beginning, it did not own its own home, but now it has a magnificent building for meetings, as well as to house its wonderful library.

The New York Academy of Medicine has a group of Committees which function in many ways to assess the temper of the relations between the medical profession and the public. It has done a very important job on this score, not alone in the area of practice, but also in medical education as well.

The New York Academy of Medicine has more

than a century of experience. That development obviously could have occurred only in a large metropolitan area like that of New York City. But most important of all, it has had strong and generous men of vision at the helm over long periods of years who have given the Academy distinguished directional leadership.

Our Academy

The Minnesota Academy of Medicine has now been in existence for two-thirds of a century. It came into being, when the State of Minnesota could count only slightly more than one-third of a century in years. In the main, it has been essentially a Dining Club of Professional Men interested primarily in the practice of medicine. It has never taken on the sustained support of any continuing endeavor. We have no home of our own, nor is it necessary that we should have one. We have no library; we have rather meager funds, there being less than \$9,000 in our treasury. However, we do have a long tradition of counting amongst our members a large number of distinguished persons in the Specialties of Medicine in the Twin Cities, including also a lesser number of members scattered throughout the State. Anyone who has been long a member of the Academy cherishes memories of evenings spent here with pleasure and profit, chatting and dining with his friends and listening to their presentations.

The character of our programs has changed quite remarkably within the last few years. Up until approximately fifteen years ago, the program was constituted largely from within the membership. As the years have gone by, and especially during the last few years, a rather large proportion of the papers have been given by young men who have done distinguished research in the Medical School of the University of Minnesota. In a sense, this is very fitting. We are all anxious to become alert to the newer developments in medicine. Moreover, we all have an anxiety to become acquainted with young men who are doing significant work in research. It is very proper therefore that the Executive Committee of the Academy during the past few years should have encouraged this trend in our programs. We are all beholden to them for their foresight in lending emphasis to that which is *new* in Medicine.

We are essentially a group of Specialists in Medicine with a primary focus of interest on

practice. All of us are aware of the great influence which research has had upon progress in Medicine. The art and the practice of Medicine have been changed for the better considerably through the agency of research.

As the Academy begins now its final third of its first century of existence, we might well contemplate taking on some function beyond that of a Professional Dining Club with an evening's scientific program. Those organizations and individuals, who can point only with pride to their predecessors, find, like the potato vine, that their best portion is underground. Would it not be worthwhile asking the Executive Committee to give consideration and thought to finding some special function which the Academy might take under its protective wing? Through such an agency, the life and influence of the Academy would be perpetuated and transmitted more directly to our successors in a tangible, objective manner. Such a manifestation of appreciation of our opportunities and recognition of our collective obligation to our profession would have the additional advantage of making a contribution to the furtherance of our art and practice.

There are undoubtedly many ways in which such an objective could be achieved. The records of the Academy indicate that Dr. S. Marx White in the November meeting in 1908, two years before he assumed the presidency of the Academy, suggested that the Academy consider the establishment and support of a Fellowship at the University of Minnesota. It is interesting to observe that the following month the membership approved of the suggestion and voted an assessment of \$5 per person to support a Research Fellowship Fund at the Medical School. As far as is known, the only temporary occupant of that position was Dr. F. W. Schlutz, who many years subsequently became Professor of Pediatrics at the University. We do therefore have a precedent for such a suggestion.

In 1953, such an annual assessment against each member of the Academy would not go far in the support of a Fellowship. Inasmuch also as we represent all the Specialties of Medicine, it probably would be more proper to consider something which might be shared equally by the Specialties of Medicine. A suitable triennial or quinquennial prize to be given to that person in the United States, whose research in the opinion of the Academy's Committee has given the most

important impetus to the furtherance and improvement of medical practice—such an award might become a function of the Academy. However, I am inclined to believe that, however important such a prize in future years may come to be, nevertheless, the administration of such a project would in itself be a very difficult task. Moreover, I am inclined to believe that the support of Scholarship through an annual gift to the Medical Library of the University of Minnesota would have a more telling effect; also that such an endeavor would be more suitable to our purposes.

When Osler came here to give his famous lecture on the campus of the University of Minnesota in 1902, President Northrup announced that the Medical Library of the Medical School had a thousand volumes in its collection. The situation has changed considerably for the better since then, and the Library also has improved correspondingly. If the Academy would take on the responsibility of sponsoring some function served by the Medical Library in a sustained manner, the Academy could well become a Patron of Scholarship in the Medical School. That also would be a function which we could all enjoy and the Academy could come to be a continuing contributor to an important and a living function of this Medical Community.

The New York Academy of Medicine came into being to help increase the confidence of the public in the Profession and to help stamp out the "rampancy of quackery." In the 1940 Constitution of the Academy, the specific purposes of the New York Academy of Medicine are listed as "support of the science and art of medicine, the maintenance of a public medical library, and the promotion of medical health and medical education." It has done its task well.

Nothing in life gives such directional growth to development as does the assumption of a serious purpose. I believe that our own Academy needs such an influence. How else can we attain the stature of importance in this Medical Community which our Founders contemplated so long ago?

Every physician needs breadth of vision which can come only through experience and study. And the true specialist must, in a sense, be a scholar. If he were not, he would not be a specialist. Scholarship must of necessity be an unrelenting and continuous labor. Johann Fichte was one of the early prophets of a budding scholarship in

Germany toward the end of the eighteenth and the beginning of the nineteenth century. Fichte's theme was cultivation of reverence for knowledge and scholarship as the mark of a scholar. I believe that all professions would do well to consider stimulation of scholarship within their provinces of action as an important function of such professional organizations. Fichte differentiated students into two classes, "Die Studierte"—students who have studied and "Die Studierende"—those who study. If it could be said that it were necessary to become classified among "Die Studierende" to become eligible for membership in the Minnesota Academy of Medicine, we would all note within our midst a quickening of interest in scholarship. Alma Mater are words, spoken with tender affection by many an alumnus who may fail to appreciate that these two noble words are synonymous with Foster Mother. If we were to assume the role of foster parent to scholarship in this medical community, we would contribute to our own development, afford ourselves a source of continuing satisfaction and begin an enterprise which one of our own Julian Wests might view with pride, looking back from the year 2000 as did Edward Bellamy's hero of that name in "Looking Backward." Our own Julian West might then say for us: "Well done, members of the Academy in the 50's, all your best is not underground."

A good library can have a tremendous catalytic effect upon the cultivation of superior scholarship. The love of books and the pursuit of learning can vitalize the intellectual life of any organization. Love of books and love of learning go hand in hand. A fine collection of books adds a savor to scholarship which fosters an interest in learning, sharpens the appetite for books and enriches the lives of all who come beneath the spell of scholarship. Every professional library should have its own Arthur Upson room where the professional students can attain a ready acquaintance with the best books of literature in the world. Who, amongst practical men, is in greater need of an acquaintance with good books than physicians? Without a large endowment but with sustained support from year to year, any organization could well become the foster parent of an important Treasure Collection for the Library of the Medical School which could come to have a telling effect upon scholarship in this Community. Why not the Minnesota Academy of Medicine?

TABLE I. POPULATION¹ AND PHYSICIANS IN MINNESOTA AND THE TWIN CITIES

1890 and 1950			
	1890	1950	Increase in Population
POPULATION			
Minnesota	1,301,826	2,982,483	230%
Minneapolis	164,738	521,718	280%
Saint Paul	133,156	311,349	
PHYSICIANS			
Minnesota	1,191	3,886	325%
Minneapolis	280	1,141	340%
Saint Paul	201	511	

Should the Academy Enlarge Its Membership?

The accompanying table gives an indication of the change in character in the population and in the number of physicians in the State and in the Twin Cities, during the past sixty years. There obviously has been greater urbanization amongst physicians than in the population as a whole.

There is also probably an even greater concentration of specialists in the Twin Cities now than there was in 1887. Moreover, we have also a rather large family of new specialties, unknown then. Amongst others are: Neurosurgery, Pediatrics, Psychiatry, and Roentgenology, to mention only major new specialties of practice.

It would appear therefore that in 1953, based on an active membership of forty for 1887, it would not be out of line to suggest a steady and gradual increase of our present active membership to 150 persons—approximately a 75 per cent increase in total membership.

The fundamental question that the Academy has to decide is whether it wants to remain essentially a Professional Dining Club or whether it is ready now to assume some of the broader functions implied in the name of glorious origin, Academy. When the German Surgical Society came into being, there was considerable difference of opinion expressed amongst its founders as to what role it should assume. Billroth favored a small informal group in which chatty types of papers would be presented. Langenbeck, however, visualized a large organization with emphasis upon a strong program. Langenbeck's opinion prevailed, and up until World War I, it probably was the strongest surgical organization in the World. If we want this Academy to continue to radiate in this Community, the influence in medicine which our founders had in

mind for it, two-thirds of a century ago, we would do well to ponder now Langenbeck's views, as they relate to the nature and responsibilities of our own Academy.

One more suggestion and I am done. I would like to see persons newly elected to membership join us at the *first meeting* following their election. I would remove the clause which makes it mandatory to present a written thesis before a person, elected to membership, can take his place amongst us. In lieu of this provision, he might be asked to submit to the Program Committee an abstract of a paper that he is prepared to present before the Academy. Journals are not in want of materials to print today, and the acceptance of a paper for publication is better left to the discretion of the editors.

It had been my intention to review some of the developments and trends in my own field of surgery which have occurred since I began the study of Medicine thirty-five years ago. However, these are well known to all of you, and many of you will be relieved, I know, to learn that I shall not try your patience by such a recitation now. It would be more proper to attempt to indicate what steps might be taken to resolve some of the pressing problems which con-

front surgeons today. On that score, I must plead incompetence to assume such a task and remind you that it is far easier to look two centuries back than it is to look five years ahead. A handsome Greek youth, Narcissus by name, is said to have gazed into a fountain and became so enamored of his own beautiful reflection that he pined away, being unable to satisfy his love of his own countenance. Mirror-gazing which engenders feelings of self complacency and satisfaction over our accomplishments is as dangerous an occupation today as it was in the days of the Greek Goddess, Nemesis, who meted out retributive justice to those who were given to too much self-adoration.

While we view with satisfaction the early years of our Academy and speak out in a spirit of grateful thanksgiving for pleasant moments spent together here in good fellowship, let us meditate the question of what legacy we want to bequeath to our successors in the Academy, who, a few decades hence, will help launch this Academy upon its second century. Will they be as satisfied with us as we ourselves have been? While we deliberate upon this matter, may I suggest that you join me in the prayer that our judges will be merciful?

NUTRITIONAL IMPLICATIONS OF SODIUM RESTRICTION

In the preparation of diets restricted to less than 0.5 gm. of sodium daily, alterations from the diet usually considered optimum may be necessary. Thus, a reduction in animal protein and the nutrients usually associated with it may be required, and certain other foods specifically prepared to remove naturally occurring sodium may be added to the diet. These alterations in the usual dietary customs of persons may sometimes compromise optimum nutrition, a matter to be seriously considered by physicians prescribing a low-sodium diet.

Such changes in the diet as the omission of salt for seasoning, using sweet butter, low-sodium bread, and omitting foods naturally high in sodium should involve no nutritional difficulties, except for any attendant decrease in taste appeal. The same is also true for processed foods packed without added sodium salts.

Limitations in the amount of meat and eggs allowed per day will sometimes be necessary, particularly if the daily sodium intake is to be 200 mg. or less. This involves a decrease in protein of high biological value and of the concomitant vitamins of the B complex.

The processing of foods to remove natural sodium may decrease the content of certain other nutrients. Products such as these are appearing on the market in increasing numbers and may be highly desirable because

of the low levels of sodium they provide. At present, the extent of the reduction in nutrients other than sodium in these foods is not known, in many instances, but efforts will be made to procure this information and make it available to physicians.

Thus, the physician prescribing a low-sodium diet must weigh carefully the therapeutic benefits to be expected against the consequences of a possible reduction in the intake of essential nutrients. This may be particularly true of persons already malnourished or with conditioning factors such as defects in digestion and absorption or abnormalities in intermediary metabolism.

The Council will consider for acceptance foods packed or prepared without added sodium provided the food is otherwise acceptable and provided the sodium content appears on the label (in milligrams per 100 gm.) in addition to a statement such as "Packed without added sodium." The Council will also consider foods processed to remove naturally occurring sodium. When significant loss of nutrients, other than sodium, is shown to have occurred, a statement to this effect must also appear on the label and detailed information concerning this reduction in specific nutrients must be made available to the Council and to physicians likely to use the product. —JAMA, Council on Foods and Nutrition, August 2, 1952.

A STUDY OF MASSES IN THE RIGHT LOWER QUADRANT OF THE ABDOMEN

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WHEREAS there is abundant medical literature pertaining to right-sided lower abdominal pain, little factual or statistical information is available concerning the problem of a palpable mass in the right lower quadrant of the abdomen. Such a lesion is not uncommon in medical practice, and while familiarity with the problems it presents is the rightful domain of all medical practitioners it would seem to be of special importance to surgeons, diagnosticians, gastroenterologists, urologists and roentgenologists. In an effort to obtain reliable statistical information regarding the problem presented by this condition, data on a group of patients who had this lesion and who had been examined and treated at the Mayo Clinic have been collected and studied, these data forming the basis for this communication.

Method and Material

A study was made of the case records of all patients who were examined at the Mayo Clinic during the year 1944 and for whom a diagnosis of palpable mass in the right lower quadrant of the abdomen was recorded. In addition a review was made of the records of 5,879 patients who were examined during the same year and who had a condition which could be a possible cause for a mass in the right lower quadrant of the abdomen. In this manner 468 patients were found to have a palpable mass in the right lower quadrant, and in 455 of these patients the cause of the mass could be considered to be proved, either by operation, postmortem examination or unequivocal clinical findings and subsequent course. This study is concerned primarily with the 455 cases.

In the evaluation of data available from the case records an attempt was made to answer the following questions, thought to be of clinical significance in the handling of patients who have a mass in the right lower quadrant:

1. What is the incidence of such masses in clinic patients and what are the age and sex distributions of patients with this lesion?
2. What lesions may cause such a mass and what is the frequency of occurrence of these lesions?
3. What is the accuracy of the clinical or pre-operative diagnosis of the cause of the mass?
4. What methods of examination are most useful in determining the cause of the mass?
5. What is the role of surgery in the management of the patient with such a mass?

TABLE I. AGE AND SEX DISTRIBUTION OF PATIENTS WITH A MASS IN THE RIGHT LOWER QUADRANT OF THE ABDOMEN

Age, years	Patients		
	Male	Female	Total
0 to 9	3	2	5
10 to 19	9	7	16
20 to 29	7	18	25
30 to 39	26	69	95
40 to 49	23	102	125
50 to 59	30	60	90
60 to 69	28	43	71
70 to 79	12	13	25
80 to 89	1	2	3
Total	139	316	455

Results

Incidence, and Sex and Age Distributions.—The 468 patients with a mass in the right lower quadrant of the abdomen comprised 0.36 per cent of the clinic registrants during the year 1944. This agrees rather well with the findings of Butler and Borgen who reported that about 1 of every 200 clinic registrants had such a mass.

It was somewhat surprising to note that women greatly outnumbered men (ratio of 2.3 to 1) (Table I). This is probably explained by the fact that women have two organs in this region not found in men, namely, the uterus and the right ovary, both of which are commonly the site of mass-producing lesions.

The age distribution indicated that this is a lesion of middle age—about two-thirds of the patients studied were in the age group thirty through fifty-nine years (Table I). Extremes in age were three weeks and eighty-six years.

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MASSSES IN THE ABDOMEN—MORTENSEN AND BARGEN

TABLE II
LESIONS FOUND TO BE THE CAUSE OF A MASS IN THE RIGHT LOWER QUADRANT OF THE ABDOMEN
455 CASES

Lesions according to site	Cases	Lesions according to site	Cases
Gynecologic	169	Renal	74
Uterus	73	Polycystic disease	17
Fibromyoma	59	Hydronephrosis	16
Endometriosis	8	Ectopic or nephroptotic kidney	14
Adenocarcinoma	5	Normal palpable kidney	10
Fundus adherent to scar of abdominal wall	1	Renal cyst	7
Ovary	72	Perinephritis or perirenal abscess	4
Cystadenoma or simple cyst	26	Carcinoma (Wilms', hypernephroma)	3
Cystadenocarcinoma	20	Palpable horseshoe kidney	2
Endometriosis	12	Renal tuberculosis	1
Solid ovarian tumor	9	Intra-abdominal	24
Cystic oophoritis and perioophoritis	5	Peritoneal carcinomatosis	12
Fallopian tube	12	Appendical abscess	6
Tubal pregnancy	5	Metastatic lesion of mesenteric node	2
Chronic salpingitis with hydrosalpinx	4	Mesenteric cyst	1
Adenocarcinoma	2	Tuberculous peritonitis	1
Endometriosis	1	Peritoneal endometriosis	1
Pelvic peritoneum	12	Internal hernia	1
Endometriosis	5	Abdominal wall	20
Adhesions	3	Sinus tract of fecal fistula	10
Pelvic abscess	4	Incisional hernia	4
Gastrointestinal	125	Lipoma	2
Cecum and ascending colon	71	Endometriosis	3
Adenocarcinoma	56	Desmoid	1
Fecal mass in cecum	7	Inguinal region	16
Actinomycosis	3	Cryptorchidism	9
Tuberculous typhlitis	2	Metastatic lesion of inguinal node	3
Chronic ulcerative colitis	2	Incarcerated inguinal hernia	3
Lymphosarcoma	1	Hydrocele of canal of Nuck	1
Ileum	29	Urinary bladder	8
Regional enteritis	22	Distended (obstructed) bladder	3
Ileocolic intussusception	4	Adenocarcinoma	3
Tuberculous ileitis	3	Diverticulum	2
Descending and sigmoid colon	11	Retroperitoneal	7
Adenocarcinoma	6	Malignant lymphoma	3
Diverticulitis	4	Aortic aneurysm	2
Chronic ulcerative colitis	1	Iliac aneurysm	1
Transverse colon	9	Abscess	1
Adenocarcinoma	6	Liver	6
Chronic ulcerative colitis	2	Riedel's lobe	2
Lymphosarcoma	1	Cysts	2
Appendix	4	Metastasis	1
Acute appendicitis	2	Cirrhosis	1
Mucocoele	2	Miscellaneous	6
Stomach	1	Hydrops of gallbladder	2
Adenocarcinoma	1	Carcinoma, prostate	2
		Carcinoma, head of pancreas	1
		Osteochondroma, ilium	1

Etiologic Factors.—The lesions responsible for the masses in the right lower quadrant of the abdomen are indicated in Table II.

The sites of the disorders causing a palpable mass, as determined by study of the 455 case records, were divided into three groups: (1) the common sites, (2) the occasional sites, neither common nor rare, and (3) the unusual or rare sites. Two hundred and ninety patients (63.7 per cent) had a mass in one of four organs, namely, the uterus, the right ovary, the right kidney, and the cecum and ascending colon. Neoplasms produced most of the masses in these organs, although hydronephrosis and malposition accounted for many of the palpable renal masses. Each of these common sites accounted for about 15 per cent of the masses studied.

In the group of occasional sites, lesions of the peritoneum were the most common, inflammatory lesions and carcinomatosis each causing about half the peritoneal masses. Lesions of the terminal part of the ileum accounted for twenty-nine of the

masses, regional enteritis being the most common such lesion. The mass was located in the abdominal wall in twenty cases. Less common sites included the right inguinal canal, the right fallopian tube, and the descending and sigmoid colon. The group of occasional sites accounted for 121 (26.6 per cent) of the 455 cases. Each organ in this group was the site of between 2 and 8 per cent of the masses studied.

In the group of unusual sites there were eleven organs, each harboring a palpable mass in less than 2 per cent of the cases. Collectively these organs accounted for forty-four (9.7 per cent) of the masses. Organs or tissues in this group of unusual sites included the transverse colon, urinary bladder, retroperitoneal tissues, liver, appendix, mesentery, gall bladder, prostate, pancreas, stomach and ilium.

The lesions producing the right lower quadrant masses in these 455 cases may be classified, according to pathologic nature of the lesions, as follows: malignant neoplasms, 128 cases (28.1

per cent); benign neoplasms, 112 cases (24.6 per cent); inflammatory lesions, 98 cases (21.5 per cent); mechanical or structural disorders, 60 cases (13.2 per cent); and developmental or degenerative disorders, 57 cases (12.6 per cent). It can thus be seen that neoplasms (benign and malignant) accounted for more than half of the masses.

Accuracy of Clinical (Preoperative) Diagnosis.

—Correct clinical or preoperative recognition of the cause of the mass was made in 398 (87.5 per cent) of the cases studied. In only fifty-seven (12.5 per cent) of the cases was the postoperative diagnosis significantly different from the clinical or preoperative diagnosis. In most of the latter cases the preoperative diagnosis was simply mass in the right lower quadrant of the abdomen, and the operation was undertaken as an exploratory procedure. In seventeen of these cases, it would seem likely that complete preoperative study could have established the correct clinical diagnosis. However, in most such cases surgical treatment would have been indicated anyway. In these seventeen cases, the barium enema and excretory urography were the procedures most often omitted from the preoperative study. In twenty-seven cases, all appropriate diagnostic procedures were carried out but an accurate and definitive preoperative diagnosis was still not possible, usually because the results of the tests were not entirely diagnostic, being inconclusive or giving an indeterminate diagnosis. The pelvic examination accounted for twenty-two of these indeterminate examinations, urography for four, and the examination with barium enema for one. In thirteen cases (2.9 per cent), the cause of the mass was of such a nature that correct preoperative diagnosis was probably not possible or practical, these being the cases in which exploratory operation was necessary in order to establish a diagnosis.

Methods of Preoperative Diagnosis.—To investigate the value and reliability of various diagnostic measures in revealing the cause of a mass in the right lower quadrant each case record was studied to determine in so far as possible which tests were actually utilized and which gave helpful evidence pointing to the correct preoperative diagnosis. The methods of examination were then classified as (1) diagnostic procedures, that is,

those examinations which resulted in positive identification of the causative lesion, or (2) contributory procedures, that is, those tests or examinations which, while not diagnostic in themselves, gave evidence which contributed to the establishment of the correct diagnosis. In 226 cases (49.7 per cent) a single diagnostic procedure resulted in the correct identification of the causative lesion while in the remaining 229 cases (50.3 per cent) the correct diagnosis depended on collection and evaluation of the results of a number of tests and examinations, none being diagnostic but each contributing helpful evidence.

Roentgenographic examination of the colon by means of a barium enema revealed the correct cause of the mass in ninety patients, while urographic roentgenography resulted in identification of the cause of the mass in forty-nine cases and bimanual pelvic examination resulted in recognition of the cause in forty-three cases. Other diagnostic procedures resulting in positive identification of the cause of the mass in smaller numbers of cases included roentgenologic examination of the upper part of the gastro-intestinal tract, various bacteriologic smears and cultures, digital rectal examination, physical examination of the mass itself, cystoscopy, physical sigmoidoscopy, cleansing enema, cholecystography, urethral catheterization and roentgenography of the bony pelvis.

The medical history of the present illness was the most useful contributory diagnostic procedure, being an important factor in preoperative recognition of the cause of the mass in 352 (77.4 per cent) of the patients studied. The general physical examination was helpful in 330 cases (72.5 per cent) and examination of the mass itself in 268 cases (58.9 per cent). The pelvic and rectal examinations were often helpful, and the past medical history not infrequently yielded important diagnostic evidence.

Management of the Patient.—Three hundred and ten (68.1 per cent) of the patients with a mass in the right lower quadrant underwent surgical treatment for this lesion while the other 145 patients (31.9 per cent) were managed medically. Definitive surgical treatment, aimed at cure of the patient, was undertaken in 228 patients (50.1 per cent of those with a mass and 73.6 per cent of those who underwent operation). Definitive medical treatment was given in forty-

eight patients (10.5 per cent of all patients studied and 33.1 per cent of those not operated on). Palliative surgical procedures were carried out in thirty-eight patients (8.4 per cent of all patients with a mass and 12.3 per cent of the patients undergoing operation), and medical palliation was utilized in the management of fifty-two patients (11.4 per cent of all patients studied and 35.9 per cent of those managed medically). No treatment was undertaken in forty-five patients with nonsurgical lesions and in forty-four patients who underwent exploratory operation.

The nature of the operation finally performed on the 124 patients for whom only an exploratory procedure was scheduled seemed especially significant. It should be pointed out that in most of these patients the cause of the mass was recognized preoperatively, the operation being listed as an exploratory procedure because the operability of the lesion was not known. In approximately a third of the 124 exploratory operations definitive therapy was carried out, in a third palliative procedures were done, and in a third the surgical exploration resulted in establishment of the diagnosis only, no surgical therapy being attempted.

Comment

Causative Lesions.—The surprisingly high incidence of uterine fibromyoma and cystic lesions of the ovary as causes of masses in the right lower quadrant of the abdomen most certainly is related to the common occurrence of these lesions rather than to their location or abdominal palpability. While most uterine fibromyomas and ovarian cysts cause pelvic masses and are not palpable abdominally, these lesions are so common that the 2 to 3 per cent which are palpable in the right lower quadrant of the abdomen constitute a relatively high percentage of the masses which occur in this region.

Perhaps our most significant observation is the fact that masses in the right lower quadrant may be caused by many different disorders, the most common cause representing less than 15 per cent of the patients presenting a mass in this location. Seventy-four different disorders were found as causes for the 455 masses, and these lesions were located in twenty-one different anatomic structures. Such data emphasize the importance of objective, open-minded approach to the diagnostic study of a patient presenting a mass in the

right lower quadrant. Such patients must not be categorized but each must be studied individually. Many possible causative disorders must be kept in mind and such diagnostic examinations must be carried out that even relatively uncommon lesions are routinely considered and ruled out as diagnostic possibilities. Certainly the diagnostic acumen of the examiner is heavily taxed in the study of a patient with such a mass.

Preoperative Diagnostic Accuracy.—Another important observation derived from the above data is the relatively high degree of accuracy with which the cause of a mass in the right lower quadrant of the abdomen can be determined clinically. This indicates that, commendable as it may be, the present-day contention of many physicians that "no mass is a good mass" and that every lump or swelling should be explored by biopsy or surgical exposure can hardly be condoned currently. Such an attitude not only encourages diagnostic laxity and fails to recognize or fully utilize modern diagnostic facilities but, more seriously, may result in ill-advised, useless surgical treatment which might have been avoided or modified had the surgeon been more energetic in the preoperative examination of his patient.

Thirty years ago a textbook⁶ on diagnosis carried the statement that "diagnosis (of abdominal masses) is largely by exclusion, seldom direct . . ." and "the probable nature of the abdominal tumor is a matter of statistics." Twenty years ago an eminent surgeon¹ wrote: "As far as tumors are concerned, the abdomen is indeed a temple of surprise, and it is by our diagnostic humiliation when the abdomen is opened that we learn." These were accurate descriptions of diagnostic reliability when they were written, but fortunately they can now probably be revised. While it is unquestionably worth while, even essential, that we realize our diagnostic limitations, by the same token there is folly in failure to recognize and utilize refinements in technique or new procedures that overcome to some extent previously insurmountable obstacles to diagnostic accuracy. Whereas reliance on surgical exploration for diagnosis of most masses in the right lower quadrant of the abdomen was once necessary, preoperative direct and positive diagnoses of the causes of many such masses are now being made regularly by clinicians, roentgenologists and urologists who

understand how and when to use modern diagnostic procedures, relatively few patients being submitted to operation for diagnostic purposes.

Furthermore, present-day methods of treatment of the causes of masses in the right lower quadrant of the abdomen require rather specific and accurate knowledge concerning the mass. Recognition of the organ in which the mass is located often suggests the most accessible route to the mass, either with medications or by surgical attack. Identification of the specific etiologic agent causing an inflammatory mass may dictate the chemotherapeutic or antibiotic agent which should be used to eradicate the infection. The value of surgical exploration and its safety are greatly enhanced if the intimate relationship of the mass to the bowel is recognized preoperatively and effective preparation of the colon has been carried out, enabling the surgeon to open, resect or anastomose bowel without danger of peritonitis. Recognition that a mass in the right lower quadrant is without doubt retroperitoneal and is approachable through an extra-peritoneal lumbar incision may offer the patient an operation with half the mortality that is commonly associated with the transperitoneal abdominal exploration of a retroperitoneal mass which would most likely be utilized if the location of the mass had not been recognized preoperatively.

Thus, current standards of medical practice would seem to indicate that, except under unusual circumstances, a simple diagnosis of "mass in the right lower quadrant of the abdomen" should not be considered adequate basis on which to recommend specific therapy or offer a prognosis, much less to advise or undertake surgical intervention, at least until the patient has been carefully examined by modern diagnostic methods in attempts to gain as much information as possible about the mass. Such a conclusion has recently been expressed by Engel.

Methods of Examination.—The data concerning the value of various diagnostic measures in determining the cause of a mass in the right lower quadrant admittedly are not entirely objective and represent only a crude attempt to show statistically a problem of interpretation. However, the point seems adequately demonstrated that such examinations as roentgenography of the colon with barium enema, excretory

urography, and careful bimanual pelvic examination should be carried out preoperatively on every patient with a mass in the right lower quadrant, the cause of which has not been accurately identified. The overwhelming number of patients who have a mass in the right lower quadrant and whose clinical history, general physical examination, and examination of the mass itself have contributed importantly toward establishment of the correct preoperative diagnosis should be ample evidence of the necessity for careful and painstaking consideration of these diagnostic procedures for every patient with such a lesion.

Management.—Since only about two thirds of the masses studied were handled surgically it would seem unwise to assume that every patient with such a lesion needs an operation. The disappointing results of exploratory operations for a mass in the right lower quadrant of the abdomen (that is, only one in three patients is materially benefited from the operation) is strong evidence that accurate preoperative clinical diagnosis should be striven for diligently before surgical exploration is recommended.

Summary and Conclusions

Data derived from the records of 455 patients with a palpable mass in the right lower quadrant of the abdomen would seem to justify the following conclusions:

1. Masses at this site may be caused by a wide variety of lesions located in any of twenty or more anatomic structures. The four most common causative lesions, accounting for about 60 per cent of the masses studied were those of the uterus, the right ovary, the right kidney, and the cecum and ascending colon. Neoplasms were accountable for most of the masses in these organs. The remaining 40 per cent of the masses were caused by seventy different types of lesions, each of which occurred in less than 5 per cent of the patients with right lower quadrant masses.
2. An accurate clinical (preoperative) diagnosis of the cause of such a mass should be conscientiously attempted in every instance, and it probably can be established in from 85 to 90 per cent of the patients who are thoroughly studied.
3. Diagnostic methods and procedures most often giving the direct and positive clinical diag-

(Continued on Page 491)

ANALYSIS OF TUBERCULOSIS CASE REGISTERS IN MINNESOTA

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IN RECENT years, mortality figures for tuberculosis have given a distorted picture of the problem of this disease in Minnesota, leading to an overly optimistic impression that tuberculosis no longer is a serious burden. On the other hand, figures of new cases reported each year, while indicating no marked drop comparable to reductions in deaths, have not been adequate to picture the continuing load of tuberculosis victims that accumulate over the years. Since tuberculosis is a chronic disease, subject to reactivation and breakdown over long periods of time, other measurements than annual case and death rates are required to indicate the problem.

Such measurements are available in Minnesota from reports submitted to the State Health Department by a number of health agencies which operate case registers as a means of providing

health supervision of all known cases of tuberculosis within their jurisdictions.

The State Health Department maintains a Central Case Record System consisting of a master index of all reported tuberculosis cases and deaths in Minnesota together with a current file of all administratively active cases, and a closed file of all cases considered administratively inactive. This system functions with local case registers through the medium of information interchange.

The local case registers presently functioning in Minnesota include that of the Minneapolis Health Department for cases in Minneapolis City; the register of the St. Paul Bureau of Health for cases in St. Paul City; and the register of Nopeming Sanatorium for cases in St. Louis County, including Duluth City. The State Health Department is attempting to decentralize its tuberculosis records system by setting up a case register in each of the Department's eight District offices to cover

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ANALYSIS OF TUBERCULOSIS CASE REGISTERS

December 31, 1952

I. Numbers of cases in current register

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
Pulmonary	1,677	1,339	2,440	5,531	10,969
Primary Active	16	19	3	57	95
Extra Pulmonary	147	69	171	418	805
Suspected	565	168	35	158	926
Total	2,405	1,595	2,649	6,146	12,795

II. Total pulmonary cases by stage in white persons fifteen years of age or older

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
Minimal	515	575	1,025	1,534	3,649
Moderately Advanced.....	511	414	809	1,710	3,444
Far Advanced	372	234	466	836	1,908
Not Specified	168	47	86	911	1,212
Total	1,566	1,270	2,386	4,991	10,213

III. Total pulmonary cases by stage in non-white persons, fifteen years of age and older

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
Minimal	27	30	22	201	280
Moderately Advanced.....	38	9	15	99	161
Far Advanced	25	9	15	83	132
Not Specified	7	4	0	116	127
Total	97	52	52	499	700

IV. Total pulmonary cases in white persons—zero to fourteen years of age..... 34

V. Total pulmonary cases in non-white persons—zero to fourteen years of age..... 22

TUBERCULOSIS CASE REGISTERS—FLEMING

VI. Total pulmonary cases by clinical status according to NTA 1950 terminology

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
Active	408	275	168	1,175	2,026
Arrested	1,013	596	10	1,270	*2,382
Inactive		381	2,220	1,596	**3,704
Activity undetermined	256	87	42	1,472	1,857
Not stated		0	0	0	0
Total	1,677	1,339	2,440	5,513	10,969

*Includes 506 of Minneapolis cases.

**Includes 507 of Minneapolis cases.

VII. Total primary active cases, zero to fourteen years of age, by color

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
White	2	16	2	12	32
Non-white	0	3	0	40	43
Total	2	19	2	52	75

VIII. Total primary active cases, fifteen years and over, by color

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
White	12	0	1	3	16
Non-white	2	0	0	2	4
Total	14	0	1	5	20

IX. Hospitalization status of total cases in current register

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
In Hospital & Sans.	442	261	156	2,149	3,008
At home	1,963	1,334	2,447	3,997	9,741
In other places	0	0	46	0	46
Total	2,405	1,595	2,649	6,146	12,795

X. Hospitalization status of total clinically active cases

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
In Hospitals & Sans.	315	253	152	937	1,657
At home	134	70	23	377	604
In other places	0	0	14	0	14
Total	449	323	189	1,314	2,275

XI. Hospitalization status of total cases classified other than clinically active

	Minneapolis City	St. Paul City	St. Louis County	Rest of State	Total
In Hospital & Sans.	127	8	4	1,212	1,351
At home	1,829	1,264	2,424	3,620	9,137
In other places	0	0	32	0	32
Total	1,956	1,272	2,460	4,832	10,520

the counties making up each District. At present three such district registers are operating. The Department in addition maintains separate registers for Indian cases, and cases in state institutions.

Information about a case varies in completeness in different registers, dependent somewhat on the purpose of the register. In general, however, each case record includes such basic data as name, age, sex, address, the type of tuberculosis diagnosed

such as pulmonary or non-pulmonary, the extent of the lesion, the clinical status whether active, arrested, or inactive, and the hospitalization status.

By analyzing the registers described above, it is possible to assemble on a statewide basis much valuable information regarding the total load of cases of tuberculosis. Such analysis has been made on three occasions, at six-month intervals, as of

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OBSCURER FEVER OF HYPERNEPHROMA

LYLE V. KRAGH, M.D., HAROLD H. JOFFE, M.D., ARTHUR H. WELLS, M.D.,
and RALPH J. ECKMAN, M.D.
Duluth, Minnesota

IT IS our purpose first, to report a case of proven hypernephroma in which the only outstanding sign and symptom was fever, and secondly, to review the cases of hypernephroma at this institution from 1936 through 1952.

Case History

This forty-two-year-old displaced person, spontaneously delivered her second child on March 21, 1952. The puerperium was complicated by a persistent afternoon fever as high as 100.8 degrees. The physical examination was negative. A heterophile antibody test, urinalyses, urine smears and cultures were likewise negative. The red blood cell count varied from 3,240,000 to 4,080,000 with 10.5 grams of hemoglobin. The white blood cell count varied from 9,250 to 11,200 with 88 per cent neutrophils. A chest plate revealed bilateral apical fibrocalcific scarring. The patient left the hospital against advice before an adequate evaluation as to the cause of the fever could be accomplished.

The patient was readmitted on May 22, 1952, with complaints of fever, weakness and loss of appetite. A history of vaginal bleeding for about five days after her last discharge from the hospital was obtained. This ceased spontaneously. There was no history of abnormal menses. The patient continued to have an afternoon elevation of temperature during this hospitalization, averaging around 100.4 degrees, associated with sweats. Physical and pelvic examination revealed nothing of note. Urinalyses were normal. The red blood cell count varied from 3,200,000 to 3,610,000 with 8.8. to 9.1 grams of hemoglobin. The white blood cell count ranged from 6,250 to 10,800 with 74 to 83 per cent neutrophils. The red cell sedimentation rate was 126 mm. per hour. Several examinations of the stools revealed no occult blood, ova or parasites. Urine smears and cultures were negative, for pathogenic bacteria, including acid-fast organisms. Six blood cultures and a Kline test were also negative. Sputum concentrates and gastric cultures failed to reveal acid-fast bacteria. The Mantoux test was three plus. The blood urea nitrogen and sugar were normal. The icterus index was 10.2 units but three different liver flocculation tests were negative. No malaria parasites were found. Agglutination test for melitensis, typhosus and tularensis were negative. A repeat heterophile antibody test was negative and bone-marrow examination revealed some increased erythroid activity. A repeat chest plate when compared to the previous film and one taken at the displaced person's camp, revealed no change. The fever did not subside on penicillin therapy and the patient was transferred to a nearby sanatorium for further

evaluation as to the activity of the bilateral apical scarring.

At the sanatorium, a repeat pelvic and bone marrow examination were negative. A frog-test for a postpartum malignancy was likewise negative. The sputa, gastrics and urine were negative for tubercle bacilli on culture and guinea pig inoculation. Several repeat blood cultures revealed no growth. The red blood cell count was 3,020,000 with 8.2 grams of hemoglobin. The white blood cell count was 12,950 with 85 per cent neutrophils and the red cell sedimentation rate was still elevated at 107 mm. per hour. In spite of no radiologic or laboratory evidence of tuberculous activity, the patient received both streptomycin and para-amino-salicylic acid. The daily fever continued, varying from 99 to 102 degrees. An x-ray of the pelvis, lumbar spine, upper gastrointestinal series and barium enema revealed no abnormalities. An intravenous pyelogram on July 28, 1952, revealed a peculiar shadow on the right side which could not be accurately evaluated because of overlying gas-filled bowel. A retrograde pyelo-uretogram was planned but the patient refused to remain in the sanatorium any longer.

The last admission was on September 9, 1952, and the patient was still running a fever. Further extensive laboratory and radiologic studies were negative except for the probable presence of a retroperitoneal mass on a repeat retrograde pyelogram. An exploratory laparotomy on September 18, 1952, revealed a tumor of the lower pole of the right kidney and a nephrectomy was done.

The 8 cm. in diameter nodular tumor was friable and yellow with areas of cystic degeneration and hemorrhage. The renal vein was not invaded. Microscopically, it was made up of large polyhedral cells with clear vacuolated cytoplasm, typical of adenocarcinoma of the kidney. On the first postoperative day her temperature dropped to normal for the first time in six months and remained normal until her discharge from the hospital on September 25, 1952.

Tumors of the kidney, like syphilis and tuberculosis, are the great mimics in medicine and produce the clinical picture of a variety of diseases.⁵ The diversity of symptoms have been attributed to: (1) pressure on adjacent structures; (2) necrosis or hemorrhage in the neoplastic tissue; (3) local extension or metastases and (4) absorption of toxic products.^{10,16}

At this institution a total of forty-two cases of adenocarcinoma of the so-called hypernephroma type were diagnosed either by surgical specimens or necropsy examinations in the period from 1936

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OBSCURE FEVER OF HYPERNEPHROMA—KRAGH ET AL

TABLE I. SEX INCIDENCE

Sex	Number	Age Range	Average Age
Male	18	39-73	60.4
Female	17	37-84	60

through 1952. Seven of the cases were considered incidental to more important necropsy findings. The sex ratio and age of the thirty-five cases is shown in Table I. There was no statistical difference as to which kidney was involved. All of the thirteen necropsy cases had generalized metastases. In the remainder of twenty-two surgical cases, the renal vein was invaded in only five instances with three of these cases coming to necropsy after an average of two years.

The usual symptoms of hematuria, palpable mass and pain is a familiar triad.^{2,6,20} In a combined series of 230 cases^{2,20} hematuria was present in 79 per cent; palpable tumor in 53.5 per cent and pain in 43.9 per cent. In our series of thirty-five cases, hematuria occurred in 51.4 per cent; palpable tumor in 20 per cent and lumbar or back pain in 11.4 per cent of the cases (Table II).

The occurrence of fever in the course of malignant disease or as a result of an infectious complication has long been known.^{1,4,7,8,11,16,20,21} The incidence of fever as a prominent symptom with one or more of the classical findings varies from 1.25 to slightly over a 11 per cent.^{4,6,16,17} There was no case in a combined series of 364 cases^{2,8,17,20} in which fever was the sole prominent finding. In our present review of the literature only sixteen cases could be found in which fever was the sole presenting symptom.^{3,4,9,10,15,16,18,19,21}

The hypernephroma type of adenocarcinoma of the kidney tends to grow slowly and the classical symptoms of hematuria, palpable mass and pain, may be late manifestation.^{5,10} The first symptom may frequently be due to metastases.^{5,10,13} In a review of ninety-two clinical and necropsy cases, the first symptom was due to either metastases or local extension in 41 per cent of the cases.⁵ In our series, the first symptom was due to metastases in six cases with pleural effusion in three; shoulder pain; bilateral strabismus and spontaneous fracture in one case each, for an overall percentage of 17.1.

The diagnosis of renal carcinoma with fever as the sole presenting symptom is difficult and often missed because these tumors frequently produce

TABLE II. SYMPTOMS

Symptom	Number	Percentage
Hematuria	18	51.4
Palpable mass	7	20.0
Back pain	2	5.7
Chest pain	2	5.7
Bilateral strabismus	1	2.8
Skeletal fracture	1	2.8
Anemia	1	2.8
Shoulder pain	1	2.8
Cough	1	2.8
Fever	1	2.8

no defect of either the pelvis or calyces. These tumors have a tendency to grow laterally and the only pyelographic change may be a displacement or an increase in the kidney size.⁷

The possibility of a hypernephroma should be kept in mind in any case of obscure fever. If the fever does not subside after nephrectomy, metastases should be suspected.¹⁶

Summary

1. A case of unexplained fever of six months' duration is reported in which a nephrectomy for adenocarcinoma of the kidney was followed by a return of the temperature to normal.⁷

2. In our series of thirty-five cases, hematuria occurred in 51.4 per cent; palpable mass in 20 per cent and either back or chest pain in 11.4 per cent.

3. The first presenting symptoms on the basis of metastases occurred in 17.1 per cent of the cases.

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Laboratory Aids to Medical Practice

Sponsored by
The Minnesota Society of Clinical Pathologists

A RAY OF HOPE FOR A CHANGE

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MINNESOTA needs a change from its archaic coroner system to a modern plan for the investigation of deaths that presently do or should come under the jurisdiction of the coroner. That this is so was ably set forth by Victor Cohn and Charles W. Bailey in their recent series of articles entitled "Hidden Murder," in the *Minneapolis Morning Tribune*.

For many decades Minnesota has had as coroners persons who are elected for a short term of office. To qualify for the office of coroner one needs no background or foundation in medicine, and no training in such procedures as investigation of death, gathering of evidence, identification, photography, chemistry or toxicology, but only the necessary filing fee and the carrying on of a more or less vigorous election campaign.

Consequently, the roster of coroners in the eighty-seven counties of Minnesota is made up of individuals from all walks of life who represent a great many different occupations. A survey shows that about half the coroners are physicians. Inquiry will reveal that most of these physicians are coroners not because they want the job but actually because of a sense of civic duty.

While, of necessity, physicians have training in disease, few have more than a little training in pathology and most of them no training in forensic or legal medicine. Most of them try to do a good job as coroner but must necessarily work under a great handicap because of the demands of the practice of medicine. Surely the fee of \$10.00 per day for investigating a death is hardly an inducement to undertake the job. The coroner or his deputy must be available twenty-four hours a day the year around, as fatal accidents, murders and violent deaths occur at all hours. That no valuable clue may be lost, destroyed or overlooked requires investigation of the scene without delay. A physician-coroner is not always immediately available.

A busy practitioner does not have the time to acquire the collateral information and training he needs to discharge fully his duties. If the physician-coroner is lacking in training in the various phases of forensic medicine, how much greater is the handicap of the coroner who has no scientific training whatsoever?

It is in recent sudden or violent death that the trained investigator has the best chance to gather pertinent and important evidence. But if the body and the place of death have been disturbed by ignorant or careless persons, be they officials of the law or curiosity seekers, then the problem of gathering evidence to solve the problem is made enormously more difficult. It may be impossible to obtain truthful photographs, measurements by triangulation or fingerprints, all of which may be of extreme importance. The innocent may be accused wrongfully, the guilty may escape or a dependent family may lose insurance benefits.

It is in deaths that have occurred a long time before discovery, particularly when decomposition has taken place or attempts have been made to cover up a crime or destroy evidence, that the investigator is really put on his mettle to reconstruct the circumstances and to determine the means and cause of death. At such times the responsible official needs to have at his command such experts in many different fields as skilled pathologists, photographers, roentgenologists, toxicologists, immunologists, botanists or anthropologists, not to mention experts in obtaining latent fingerprints and experts in ballistics and fabrics.

Obviously such experts are not available in every county in Minnesota. If, however, a state-wide medical-examiner system could be set up, it would be possible to develop machinery so that an early, if not an immediate, investigation could be made. Undoubtedly many unsuspected violent deaths would be found. Exact causes of death could be determined and guesswork to a consider-

LABORATORY AIDS TO MEDICAL PRACTICE

able degree eliminated. On a state-wide basis such a system would probably cost less than the present inefficient coroner system.

For a long time many physicians have been aware that the present coroner system is anything but satisfactory. A committee dealing with this subject has been in existence for many years. This committee of the Minnesota State Medical Association has done a great deal of work on this subject, gathering information on laws in other states and determining how the medical-examiner system has worked out where it has been established. Not long ago Dr. C. E. Proshek, the chairman, called a meeting of the committee and invited representatives of the legal profession, the sheriffs, the Minnesota State Board of Health, the pathologists, the insurance companies and the legislature to talk over this problem.

It now appears, according to a recent item in the *Minneapolis Star*, that an interim commission of the legislature has been proposed to study the question of the medical-examiner system versus the coroner system.

This is indeed a ray of hope that we may now be on the way to replacement of the worn-out

coroner system with a medical-examiner system in the best sense of the word, namely a medical examiner appointed because of ability and training and with indefinite tenure.

This is the fifth in a series of editorial reports sponsored by the Minnesota Society of Clinical Pathologists and designed to emphasize ways in which laboratory methods may aid in the practice of medicine. The editorial committee of the society is glad to present this timely comment from Dr. McCartney, who is one of the leaders in the movement to bring up to date the investigation of sudden death in Minnesota.

Wherever communities have replaced the old-fashioned coroner system with the modern scientific methods incorporated in a medical-examiner system, the benefits accruing to such communities have been undeniable. Pathologists are proud of the part they play in the detection of crime and in the solution of problems concerned with sudden death. The time has come for Minnesota to discard the outmoded coroner system, under which you can get away with murder.

This presentation again emphasizes the multifaceted character of the modern laboratory physician. Practicing physicians are urged to utilize more extensively the services of their colleagues in pathology. The editorial committee, consisting of Dr. Arthur H. Wells of Duluth and Drs. Arthur H. Sanford and George G. Stilwell of Rochester, welcomes comments and suggestions regarding this series of reports.

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A STUDY OF MASSES IN THE RIGHT LOWER QUADRANT OF THE ABDOMEN

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nosis of the cause of such a mass are roentgenography of the colon with barium enema, urographic roentgenography, bimanual pelvic examination, and careful physical examination of the mass itself. However, the diagnosis can be established in only about half the cases by one of these direct diagnostic procedures, making it necessary in an equal number of patients to evaluate carefully the findings and results of a battery of routine tests and examinations, each contributing evidence but not being diagnostic in itself. The most useful of these contributory diagnostic measures are the history of the present illness, the general physical examination, the examination of the mass itself, bimanual pelvic examination, rectal examination, and inquiry into the past medical history.

4. While surgical treatment is indicated in about two thirds of patients with a mass in the right lower quadrant of the abdomen, clinically

diagnosable nonsurgical lesions cause such a mass commonly enough that routine surgical exploration without thorough preoperative attempts at diagnosis must be decried as unsound and not commensurate with the highest standards of modern medical practice.

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President's Letter

THE DELEGATES DECIDE

A virtual about-face was made by the House of Delegates of the American Medical Association on March 14.

Meeting in special session in Washington, D. C., to act on President Eisenhower's Reorganization Plan No. 1, the delegates committed the American Medical Association to official support of the new Department of Health, Education and Welfare. The delegates were honored to hear President Eisenhower, Senator Taft, and Congressman Walter Judd, who spoke in favor of the plan.

But support was not immediate, nor did it come easily. The delegates undoubtedly remembered the Association's long stand for a separate department of health, with a doctor of medicine at its head. But after many deliberations, some of them heated, a decision was made to accept the reorganization plan, with reservations.

The plan itself transfers all former activities of the Federal Security Administration to the new department, elevating the secretary to cabinet status. The secretary will have a Special Assistant for Health and Medical Care who will be a doctor of medicine with no previous governmental experience, but with wide experience in the field of medicine.

Granting that the plan was not what the delegates originally wanted, the general feeling was that it is a step in the right direction, that it is basically a good plan—that with proper support and co-operation, it will work well.

The reservation made by the House was this: "the Association reserves the right to make recommendations for amendment of the then existing law or to press for the establishment of an independent Department of Health, if the present plan does not, after a sufficient length of time for development, result in proper advancement in and protection of health and medical science and in their freedom from political control."

Dr. Louis H. Bauer, president of the American Medical Association, makes this conclusion: "I believe (the resolution) was a wise decision, in view of all the aspects of the situation . . . we shall be embarking on a new sea of adventure, and I believe the medical profession of the United States can wield a constructive influence on the health of the American people. I am sure that we shall have every possible co-operation from Washington. The address of the President of the United States to the House of Delegates certainly assured us of that."



President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor*; GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

POLIO CULTURE

OF CONSIDERABLE local interest should be the research conducted at the University of Minnesota by Drs. Jerome T. Syverton and William F. Scherer. Associated in this investigative work in connection with poliomyelitis and supported by the March of Dimes has been Dr. George O. Gey of the Department of Surgery of Johns Hopkins University. They have shown that cultures of the polio virus can be isolated from blood or stool of infected individuals by employing a medium of human cells in tissue culture.

The cells found by these investigators to be well suited as a culture medium for this virus were obtained from a human carcinoma of the cervix removed at the Johns Hopkins Hospital in 1951 and propagated in serial test tube cultures since that time. The polio virus grows rapidly in this cellular medium. Within 72 hours the amount of polio virus has increased about a million times. The investigators have been searching for a non-nervous tissue for continuous cultivation since 1949. The present stable strain of human cell promises to provide a culture medium for practical use in the fight to control poliomyelitis.

This cancer cell tissue apparently can be kept growing indefinitely in serial test-tube cultures. Since the cells quickly reveal characteristic damage from infection by the polio virus, they can be used as an index of virus growth. So hardy are these cancer cells in culture that the tubes containing cells can be shipped long distances without losing their value for culture growth. In addition to the use of this medium for detecting polio infection it may be used to determine an individual's immunity to any of the three types of polio.

AMERICAN FEDERATION OF MEDICAL CENTERS

RECENTLY a proposal was made by Dr. Edgar H. Norris to revolutionize the provision of medical care in this country by enlisting the as-

sistance of businessmen in establishing central clinics in centers of population (more than one in the larger cities), to provide medical care of a standardized type through insurance.

Dr. Edgar H. Norris was a graduate of the University of Minnesota Medical School in 1919, and was associated with Dr. Arnold Schwyzer of Saint Paul in the practice of surgery from 1919 to 1922, when he formed a partnership with the late Dr. Frederick H. Neher. In 1924, he established his own medical group and practiced until 1930, when he became ill and moved to Mexico to spend some five years in recuperation. During this period he is said to have developed his plans to revolutionize the provision of medical care in America. In 1935, he was a fellow in Pathology at the University of Minnesota Medical School and in 1938, was made Professor of Pathology at Wayne University College of Medicine at Detroit. In 1945, he became a Research Associate at Massachusetts General Hospital in Boston as an associate of Dr. Tracy B. Mallory. He now lives in Detroit and has founded the American Federation of Medical Centers Plan for supplying complete medical, hospital, surgical, and dental care at low cost to individuals on a voluntary prepaid basis.

Not having access to Dr. Norris' book,* we did not feel qualified to pass judgment on his ideas. We were more than a little interested however to read Dr. Frank G. Dickinson's critical analysis** of Dr. Norris' book which appeared in the *Journal of the American Medical Association* of February 7, 1953. Dr. Dickinson has a Ph.D. degree and is Director of the Bureau of Medical Economic Research of the American Medical Association and his opinions merit consideration.

In brief, Dr. Norris' scheme is to give businessmen a large degree of control over medical care in order, in his opinion, to make that care more

*Norris, E. H.: *Medicine Rededicated, Health by Community Enterprise*. Detroit: American Federation of Medical Centers (limited private printings).

**Dickinson, Frank G.: The Norris panacea. *J.A.M.A.*, 151:511 (Feb. 7) 1953.

efficient. Medical care is to be provided by a single institution in each community in which two-thirds of the doctors are to be general practitioners and one-third specialists. Competition between physicians is to be eliminated. He wants to scrap the present system of private practice and substitute a form of panel practice with restrictions on the patient's free choice of physicians, the cost to be met by an insurance payment of \$100 per family. The scheme envisions all the doctors voluntarily joining groups to take part in a standardized type of practice and be paid by insurance companies.

As the title of Dr. Norris' book—*Medicine Rededicated*—infers, his scheme is intended to bring the millenium and solve all problems of medical care in our country. He infers that medical care today is a hodge podge of inefficiency and he does not give due consideration to the great progress that has been made in the past thirty years particularly in the provision of medical care in our country.

We agree with Dr. Dickinson that medical care cannot be furnished as other commodities and furnished by big businessmen but that personality as well as skill is still a valuable component of medical service. We agree that the profession would not voluntarily adopt Dr. Norris' plan of practice and that governmental authority and dictation would be necessary to accomplish such a revolution. While we admit there is room for improvement in the provision of medical care we believe that this will be accomplished better by evolution than by revolution.

CHEMOTHERAPY IN TUBERCULOSIS

ONE YEAR ago reference was made in these columns* to a new antituberculosis drug, isonicotinic acid hydrazide, which had been given considerable publicity in the lay press. This had followed the premature publication in the New York newspapers of investigational work then being carried on at the Seaview Hospital and for which claims of some rather miraculous cures were being made.

Because of these exaggerated claims, most physicians interested in tuberculosis were skeptical and reluctant to accept the drug as having as favorable an effect as the previously well-tested

streptomycin. This skepticism was enhanced by the subsequent observations that in the first few months of treatment, patients receiving streptomycin were showing more objective evidence of improvement than were those receiving isonicotinic acid hydrazide.

As is usual in the case of new drugs, the truth lies apparently somewhere in between the two extremes. Later observations on patients receiving isonicotinic acid hydrazide reveal that after approximately four months' treatment there is little to choose between the two drugs. This also points to the fact that both drugs are being given over much longer periods than was common in the beginning, courses of twelve months or longer not being uncommon.

In order to accomplish these longer courses, it is of course necessary to combine both streptomycin and isonicotinic acid hydrazide with para-aminosalicylic acid or with each other in order to delay the emergence of resistant strains of tubercle bacilli. With the present dosage schedules, this resistance factor seems to be the most important consideration at the present time, as evidence of toxicity, fortunately, is rather uncommon.

As with all other forms of treatment for tuberculosis, it has again been shown that there is no sure-fire cure. This is not to say that these chemotherapeutic agents are without value. In fact, streptomycin and isonicotinic acid hydrazide are extremely helpful. All of us are very much impressed by the almost unbelievable improvement noted in some patients receiving these drugs, patients who a few years ago would have most certainly died. In addition, we are also impressed by the amount and type of surgery which may now be done on tuberculous patients under the protection of these drugs.

However, the use of these drugs—valuable as they are—belongs in a well-integrated plan of treatment including rest, surgery and the other time-tested forms of therapy. They should be used in a sanatorium where the proper studies on resistance and toxicity may be made, and the patient properly evaluated. Eradication of tuberculosis may not occur for many years to come, but we can most certainly advance toward this goal if we use the tools at hand in the most efficient manner.

G.C.R.

*New anti-tuberculous drugs. Minn. Med., 35:436 (May) 1952.

THE DISTRIBUTION OF GAMMA GLOBULIN

WITH the approach of the poliomyelitis season, physicians will receive inquiries as to the value of gamma globulin in the prevention of poliomyelitis and who should receive it.

The profession has been recently circularized by the Minnesota Department of Health to the effect that gamma globulin has been made available through the combined efforts of the Red Cross and National Foundation for Infantile Paralysis but that its distribution is to be made through the State Department of Health. The method of distribution in Minnesota will be to inoculate contacts fifteen years of age or younger in households where poliomyelitis occurs and pregnant women of any age who are household contacts of a case during the three days prior to and the five days following the onset of the first symptoms of the disease. The physician will be able to obtain the needed gamma globulin by submitting the required data to the Minnesota Department of Health, Division of Disease Prevention and Control, on the University Campus, Minneapolis 14 (Telephone Gladstone 5973 or Prior 4574).

A statement by the Division of Medical Sciences of the National Research Council appears in part in this issue. It presents in some detail the problems involved in the control and prevention of poliomyelitis and is published for the information of the profession. It is obvious that the 15,000,000 children under the age of fifteen cannot be inoculated with the 1,000,000 doses of available gamma globulin.

As is evident, many inoculated children will develop polio, and unwarranted promises should not be made about the efficacy of gamma globulin. According to the reported series, however, there is a lower incidence of poliomyelitis in inoculated children than in control groups, which warrants the attempt to prevent or modify a comparative few poliomyelitis infections.

HAROFÉ HAIVRI

The Hebrew medical journal, Harofé Haivri, initiated by a group of Jewish physicians, made its appearance twenty-five years ago. The paucity of medical terms in the Hebrew language was a real handicap, and one of the principal objectives of the journal was to create a medical terminology in Hebrew.

The need for such a journal in Palestine was evident. Lists of new terms in Hebrew have appeared in each

issue of the journal from the start, the new words having been contributed by those expert in Hebrew philology. In addition to new terms having been coined, old terms have been resurrected. The journal has served as a bridge between Jewish physicians in America and those in Palestine.

Thus the ancient Hebrew tongue has been adapted to the needs of modern medicine and the medical students in the Medical School of the Hebrew University in Jerusalem can take all of their courses in Hebrew.

MEDICAL SCHOOL FACULTY PUBLICATIONS

The Bulletin of the University of Minnesota Hospitals and the Minnesota Medical Foundation will contain a section listing Publications of the Medical School Faculty. The purpose of this listing is to keep the members of the faculty posted in regard to the publications of other faculty members. Faculty members are urged to transmit to Dr. Robert B. Howard, Director of the Department of Continuation Medical Education, 3330 Powell Hall, University of Minnesota, the titles, journal, volume, page number, and date, of medical articles when they appear.

OBSCURE FEVER OF HYPERNEPHROMA

(Continued from Page 489)

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DISTRIBUTION AND USE OF GAMMA GLOBULIN

During the past few months, wide publicity has been given to the results of studies indicating that a fraction of human plasma, known as gamma globulin, has some value as a prophylactic agent for paralytic poliomyelitis. As a result of this publicity, an overwhelming demand for the material may be anticipated in the coming months. The purpose of the present document is to outline the steps that have been taken to meet this situation and to discuss briefly the principles on which current plans for the distribution of gamma globulin have been based.

The supply of gamma globulin is severely limited. It is estimated that the maximum amount available this summer will not exceed 10,000 liters. Even if this were all used for the prophylaxis of poliomyelitis in children, it would provide less than one and a half million average doses. Moreover, the dose would be large enough only to give protection for four to five weeks. How inadequate is this supply to meet the demand will be evident when it is recalled that there are some 40 million children in the United States under fifteen years of age.

The situation is even less favorable than these figures indicate. Gamma globulin contributes to the public health in ways other than in the prophylaxis of poliomyelitis. It is well established as a valuable agent in the control of measles and of infectious hepatitis. It is proving its effectiveness in the treatment of the rare condition of hypogammaglobulinemia. Provision must be made to reserve amounts of gamma globulin adequate to meet these needs. Furthermore, since gamma globulin is a product derived from human blood, consideration must be given to the requirements of military and civilian services for whole blood, plasma and albumin. To maintain a well-balanced National Blood Program, blood collected by the American National Red Cross must be wisely apportioned between these varied needs.

Shortly after the outbreak of the Korean War, it was recognized that the competing demands of several Government agencies for blood and the derivatives of blood might become acute. To assure an equitable distribution, the Office of Defense Mobilization was assigned the task of co-ordinating the National Blood Program. Late in 1952, the evidence for the value of gamma globulin in the prophylaxis of poliomyelitis was first published. Realizing that this new development would lead to an extreme demand for gamma globulin during the next poliomyelitis season, the Office of Defense Mobilization turned to the National Research Council for advice. In response, the Council appointed a panel of experts in public health services, epidemiology and poliomyelitis to study the problem. There was general agreement that the equitable and effective use of available supplies of gamma globulin could be achieved

only by the adoption of a system of controlled distribution. In consultation with the foremost authorities on poliomyelitis, an allocation program was devised and submitted to the Office of Defense Mobilization. The recommendations of the panel were approved in principle by the Health Resources Advisory Committee, Office of Defense Mobilization, on April 15, 1953. The plan, in the form which has been communicated to all health authorities, is attached as an appendix to this agreement. The discussion that follows is a brief review of the nature of gamma globulin, the amounts that are expected to be available this summer and the criteria on which the effective use of the material should be based.

Gamma Globulin

Gamma globulin is the name given to one of several fractions of the protein component of human plasma. It is comparable with the product officially known as immune serum globulin. Gamma globulin is prepared commercially by a method involving a series of precipitations with varying concentrations of alcohol under controlled conditions of acidity and low temperature. An average donation of blood (500 cc.) yields 7 cc. of a 16 per cent solution of gamma globulin. This represents a single recommended dose for the prophylaxis of poliomyelitis in a 50-pound (6- to 7-year-old) child.

The production capacity of existing fractionating plants is limited.

Administration.—Gamma globulin is available as a 16 per cent solution. This solution is opalescent and somewhat viscous, necessitating injection through a No. 18 or 20 needle for quantities required for the prophylaxis of poliomyelitis. Injections should be made intramuscularly, using a separate syringe and needle for each subject. Gamma globulin should never be given by the intravenous route.

The use of separate syringes is recommended because of the danger of contamination of the syringe with blood containing the virus of homologous serum hepatitis. This may occur when one attempts to withdraw blood in order to be certain that the needle point is not in a vein. It is for this reason that the repeated use of the same syringe carries the hazard of the transmission of homologous serum jaundice. No instance of hepatitis has been recorded following the use of gamma globulin which has been prepared and administered in the manner described above.

The intramuscular injection of gamma globulin is not accompanied by any significant reactions. The danger of local or systemic reactions must, however, be considered if repeated injections are contemplated.

Measles

A dose of 0.1 cc. per pound body weight, when given soon after exposure, will prevent infection in most cases. When given later in the incubation period, this dose

A statement by the Division of Medical Sciences, National Research Council, April 20, 1953.

will result in modification of the disease. A dose of 0.02 cc. per pound body weight will usually modify the severity of the attack if given soon after exposure to infection.

In general, modification is to be preferred to prevention. Because of the seriousness of the disease in the younger age group, it is suggested that modification be attempted in all children below the age of three years who have been exposed to infection.

Prevention rather than modification may be warranted in hospital situations involving debilitated children and in individual cases where there is concurrent serious disease such as clinically active childhood tuberculosis.

The selection of exposed children rarely presents difficulties since the contact is almost always a frank clinical case and the time of exposure can frequently be determined. A history of a previous attack of measles should suffice to distinguish immune from susceptible children, and thus determine the need for prophylaxis following exposure.

Poliomyelitis

Two reports^{2,3} by Dr. W. McD. Hammon and his associates are available on the epidemiological studies which form the basis for the use of gamma globulin in the prophylaxis of paralytic poliomyelitis. The children investigated ranged in age from one to eleven years and the doses used were 4, 7 or 11 cc., depending on the weight of the child. The average dose approximated 0.14 cc. per pound body weight.

Significant protection was demonstrated from the second through the fifth week following injection and diminishing protection was evident from the sixth to the eighth week. There was no significant difference in the number of cases of poliomyelitis in the treated and control groups in the week following injection, but there was evidence of mitigation of paralysis in the cases occurring in the children who had received gamma globulin. This evidence is the basis for the conclusion that gamma globulin will be most effective if given shortly before or as soon as possible after infection. It is of no value after clinical symptoms of the disease have become apparent.¹

Criteria for Diagnosis.—It will be noted that the basis for allocation to the States is dependent upon the reported incidence of the disease, with the suggestion that the incidence of paralytic cases may be used as a control in making additional and supplemental allocations.

To insure uniform reporting it is suggested that physicians and health departments adopt criteria for diagnosis similar to those formulated by the National Conferences on Recommended Practices for the Control of Poliomyelitis.⁵ The following is an excerpt from the above document.

"Diagnostic criteria of paralytic or non-paralytic poliomyelitis should generally include three or more of the following:

1. history compatible with poliomyelitis
2. fever
3. stiff neck and/or stiff back
4. 10 to 500 cells per cc. of spinal fluid taken during the acute or early convalescent period of the disease

5. spinal fluid protein elevated above normal limits
6. demonstrable muscle weakness or paralysis.

"Cases which present only (1) history compatible with poliomyelitis, and (2) fever, should be classified as presumptive (abortive) poliomyelitis.

"Paralytic cases are defined as those in which definite weakness or paralysis has been detected and persisted during at least two examinations made at intervals of at least several hours. Results of an examination for paralysis of muscles of the extremities or trunk may be very unreliable during the period of muscle tenderness or 'spasm.'"

Community Prophylaxis.—Community prophylaxis of age groups at the greatest risk is indicated only in areas in which the incidence is exceptionally high and the onset of the epidemic is abrupt. In Hammon's studies in Harris County, Texas, where the epidemic rate was 82/100,000, only 0.4 cases were prevented per 1,000 injections. The effectiveness rose to 3.4 per 1,000 in the Iowa study where the epidemic rate was nearly 400/100,000. A further difference between these two epidemics lay in the fact that the former was prolonged over many months whereas the majority of the cases in Iowa occurred in a period of two months. The effectiveness of mass prophylaxis is proportional to the incidence of the disease in the selected age group during the few weeks following injection and is influenced by the intensity of the outbreak as distinct from its ultimate rate. Mass prophylaxis is most effective if instituted about three weeks prior to the peak of an unusually intense epidemic.

Household Contacts of Clinically Diagnosed Cases.—During epidemics, the incidence of secondary cases in families is five to twenty times the rate of poliomyelitis in the general population. That is to say, the members of a family in which a case occurs are subject to a much higher risk than are individuals in the community at large. On the basis of risk alone there would appear to be good reason to give priority to the prophylaxis of family contacts. There are, however, no controlled studies of the effectiveness of gamma globulin in the protection of household contacts of diagnosed cases. There is much evidence to indicate that infection is often widespread in families at the time the first case is recognized. If gamma globulin were effective only when given prior to infection the case for household prophylaxis would be prejudiced. Hammon's results suggest, however, that inoculation after infection but prior to the onset of symptoms may be expected to modify the disease although it may not prevent it.

It has been observed that 60 per cent of secondary cases within a household occur within five days of the diagnosis of the first case. Even if gamma globulin is administered promptly to the household contacts, it will not be expected to prevent or modify the severity of disease in these cases. An additional 30 per cent of the secondary cases will occur within a few days of inoculation. Hammon's results suggest that this group of cases may be mitigated in severity.

The final 10 per cent of secondary cases will occur in the period in which the protective effect of gamma globulin is maximal and it is this fraction of cases that one may hope to prevent by the use of household prophylaxis. This would, at first sight, appear to be a poor return on the investment were it not a fact that the

rates for this small fraction of delayed cases are comparable with the rates among all children in epidemic areas. On this basis, household prophylaxis may be expected to be as effective (cases prevented per 1,000 doses of gamma globulin) as community prophylaxis in the prevention of epidemic poliomyelitis and may be more effective if weight is given to modification as well as prevention of the disease. In areas in which epidemic proportions have not been attained, there will be no justification for general community prophylaxis.

Intimate Contacts of Clinically Diagnosed Cases.—

This is simply an extension of household prophylaxis to include individuals who are judged to have been as intimately associated with the diagnosed case as were the members of the household. The extension is logical but raises the difficulty of defining the criteria of intimacy. The method is likely to be most useful in rural and in self-contained suburban communities in which the number of intimate contacts of an individual is limited.

The extension of prophylaxis from household contacts to equally intimate contacts must be used with restraint; otherwise, the allocations to States will be rapidly depleted. It is anticipated that the responsibility for the definition of extra-household contacts and the areas within the State in which this method of prophylaxis may be used to advantage will rest with the State Health Officer.

Household Contacts of Suspected Cases.—The immunization of household contacts of suspected cases may be viewed as a selective form of community prophylaxis which is specifically directed toward those individuals in the community subject to the most intimate exposure to the virus of poliomyelitis at the time that prophylaxis is undertaken. The use of this method is advocated only in intense epidemic situations. It may be particularly valuable in sparsely populated areas in which sporadic cases lead to extremely high rates of incidence but which are not suited to mass prophylaxis.

The method has the merit of giving protection to individuals who may be exposed to infection several days earlier than would be possible were the injections delayed until the physician could make a more certain diagnosis. There is a further hypothetical advantage which is of quite undetermined value although it may be most significant. Infection with the poliomyelitis virus is much more likely to be abortive than paralytic. It follows that the first invasion of a family by the virus is probably evidenced only by a case of minor illness. Should the case actually be one of poliomyelitis, immunization of the family at this time may prevent any paralytic case from developing.

The prophylaxis of contacts of suspected cases has serious disadvantages. Its efficacy is just as dependent as is that of community prophylaxis on the accurate prediction of epidemic conditions. If it is used in other than epidemic areas, much gamma globulin will be squandered on contacts of minor illnesses, a negligible proportion of which are poliomyelitis infections.

The method has been described as a selective form of community prophylaxis. It differs in that the office of every physician in the area will become a prophylac-

tic clinic. From one point of view, this will simplify administration by avoiding the problems that are associated with the organization of centralized clinics. On the other hand, if a significant fraction of the total population in the area is involved, it may overtax the physicians and result in undesirable delay in completing the required number of injections.

Summary

It is estimated that about 1,000,000 average doses of gamma globulin will be available for the prophylaxis of poliomyelitis during 1953. The selection of the group of individuals in which this limited supply of material can be used most effectively presents many epidemiological and administrative problems. Four alternative methods have been recommended by the Division of Medical Sciences, National Research Council, and have been incorporated in the allocation plan adopted by the Office of Defense Mobilization. The advantages and disadvantages of these methods in particular situations are reviewed. The allocation plan is based on the principle that it is the local health officer who is in the best position to decide which method of prophylaxis will most effectively meet each local situation as it arises.

The household contact plan would appear to be the most effective in areas of low or moderate incidence, with possible extension to include intimate contacts other than family members. With high epidemic incidence in a community with an intense outbreak, either community prophylaxis of age groups particularly susceptible or extension of the household contact plan to include contacts of suspected cases may be suitable. Factors such as community size, expected severity and duration of the epidemic, facilities for the injection of large numbers of individuals and the availability of gamma globulin may influence the decision as to the plan for emphasis in a particular area.

The plans are of sufficient latitude, however, to apply to almost any situation, and appear to offer some hope of restricting the use of the scarce material to the groups at greatest risk.

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CHANGE IN VITAL STATISTICS LAW TO AFFECT PHYSICIANS BEGINNING JULY 1, 1953

Physicians must be aware of a fundamental change in the Vital Statistics Law which affects birth and death registration in townships and villages and in certain cities beginning with July 1, 1953.

The amended Vital Statistics Law provides:

1. That villages and townships cease to be primary registration districts for birth and death registration purposes.

2. That cities may remain as primary registration districts if they elect by ordinance to continue local registration of births and deaths.

3. That each county will be a primary registration district.

4. That local registrar in each county will be the Clerk of the District Court, and the local registrar in each city adopting a registration ordinance will be the Health Officer.

5. BIRTH CERTIFICATES FOR CHILDREN BORN OUT OF WEDLOCK WILL CONTINUE TO BE FILED WITH THE STATE REGISTRAR, DR. A. J. CHESLEY, SAINT PAUL.

Physicians filing birth certificates on or after July 1, 1953, without respect to date of birth, must file them as provided by the amended Vital Statistics law which reads as follows:

Minnesota Statutes 1949, Section 144.151 and 144.157 as amended by Chapter 309, Laws of 1953.

Section 144.154.—For the purpose of sections 144.151 to 144.204, each city which by ordinance elects to maintain local registration of vital statistics and each county shall constitute a primary registration district. The state registrar may establish registration districts on United States government reservations and appoint local registrars for them.

Section 144.157. Subd. 1.—In the cities which by ordinance elect to maintain local registration of vital statistics the health officer shall be the local registrar. In counties the clerk of the district court shall be the local registrar.

ANALYSIS OF TUBERCULOSIS CASE REGISTERS IN MINNESOTA

(Continued from Page 486)

December 31, 1951; June 30, 1952; and December 31, 1952. Through the co-operation of the agencies concerned, considerable progress has been made in simplifying and clarifying the reports, so that for the first time a reasonably accurate tabulation is possible of several basic factors.

The analysis has included only the file of current cases as contrasted to the file of closed cases. A current case in a tuberculosis register is one which is administratively active in the sense that the case is under current medical supervision or in need of such supervision. Some agencies with well-developed health organizations can extend supervision to more cases of tuberculosis and for longer

periods than can be done by other jurisdictions, but in either instance the cases included in their current files represent the work load of tuberculosis recognized by the agency as their primary problem. Thus, in the fifteen years from 1938 through 1952, 42,273 cases of tuberculosis were reported to the State Health Department in Minnesota. Many of these individuals have since died, been lost track of, moved out of the state, healed, or are in no need of supervision. Yet, as of December 31, 1952, as shown in the attached tables, 12,795 cases of tuberculosis were still in the current files of health agencies in the state, and presumably were receiving supervision to some degree so that they were administratively active.

In classifying cases of tuberculosis from the clinical standpoint, the uniform terms and definitions published every ten years by the National Tuberculosis Association have been accepted and employed by most reporting agencies and are used in the register analysis here described. Thus, of the total 12,795 current cases of tuberculosis, 10,969 are classified as pulmonary tuberculosis, and include 700 non-white persons. From the standpoint of clinical activity of the disease itself, 2,026 pulmonary cases are clinically active and thus potential sources of new infections. As of December 31, 1952, 509 of these active pulmonary cases were at home or somewhere other than in hospital, and an additional 109 clinically active cases of non-pulmonary tuberculosis were recorded as outside of hospitals and sanatoria.

These are the more striking findings that appear from looking at the records. Undoubtedly, many of the cases now included in current files could be properly transferred, after review, to closed files, thus decreasing the apparent tremendous burden of tuberculosis cases that continue to need supervision. More important, however, and the real key to eventual elimination of tuberculosis, is the great need to strengthen and expand the services of all health agencies concerned so that more supervision of more cases, both current and closed, can be provided. By more frequent physical examinations, x-rays, and health supervision, current cases will become noninfectious for others, and closed cases that break down and become clinically active will be discovered earlier. Early discovery of infectious cases and prevention of spread of the disease to new victims remain the keystones to tuberculosis control.

Medical Economics

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

REORGANIZATION PLAN GOES INTO EFFECT

The Eisenhower administration's Reorganization Plan No. 1, of 1953 has gone into effect, with the sanction and blessing of the House of Delegates of the American Medical Association, which group also put an important reservation on the operation of the plan.

The reorganization plan transfers all functions of the Federal Security Administration into the new executive department, officially titled the Department of Health, Education and Welfare. The new department will also have a Special Assistant to the Secretary of Health and Medical Affairs, and the plan provides: "There shall be in the Department a Special Assistant . . . who shall be appointed by the President by and with the advice and consent of the Senate from among persons who are recognized leaders in the medical field with wide non-governmental experience, shall review the health and medical programs of the Department and advise the Secretary with respect to the improvement of such programs and with respect to necessary legislation in the health and medical fields, and shall receive compensation at the rate now or hereafter provided by law for assistant secretaries of executive departments."

The acceptance of the plan by the AMA House of Delegates marks a new departure for that group, for, up to this time, organized medicine has officially supported the creation of a separate Department of Health.

However, serious thought and plenty of heated discussion were enough to prompt delegates to vote for the plan. Meeting in special session on March 14, the delegates voted approval of the administration plan to create a Department of Health, Education and Welfare.

The meeting was highlighted by the appearance of important personages: President Eisenhower, Senator Taft, Mrs. Oveta Culp Hobby, and many

officials from the American Medical Association.

President Eisenhower spoke to the delegates in his usual winning manner, asserting that he felt that decisions would be reached that would be for the good of the people of the United States. He stated his faith in Americans' wish to do the right thing, and expressed his confidence that doctors will provide needed medical services, but that they will do so much better with the cooperation and friendship of the administration rather than by its direction or under that of any big "poobah" in this field.

Senator Taft and Congressman Walter Judd both appeared in support of the reorganization plan.

The plan had been submitted to Congress on March 12, thereby foregoing the probability of the creation of a separate Department of Health. According to Dr. Louis H. Bauer, president of the American Medical Association, since there was then no possibility of getting a separate health department, "we were all anxious to see that the best possible status be established for health and medicine." Dr. Bauer reports the new special assistant's responsibilities as follows:

"As a result the reorganization plan introduced provided a new position, that of a special assistant to the Secretary. All medical activities within the new department, as well as all medical phases of any activities within education or social security, must be cleared through this special assistant to the Secretary. This will include appropriations and budgets as well as policies. The same special assistant will also be the representative of the Secretary at all interdepartmental meetings at which health will be a topic for discussion and also at congressional hearings where appropriations involving health will be discussed. Furthermore, this special assistant must be selected from among persons who are recognized leaders in the medical field. . . . This gives medicine a status of dignity and control over medical affairs, subject only to action of the Secretary."

Resolution Adopted

The resolution which the House of Delegates adopted on March 14, explains previous stands and gives adequate reasons why a new position has been taken. It states:

"The House of Delegates of the American Medical Association has for nearly 80 years been on record as favoring an independent Department of Health in the federal government. The reason for this stand has been that the House felt that health and medicine should be given a status commensurate with their dignity and importance in the lives of the American people, and that they should be completely divorced from any political considerations.

"The Board of Trustees . . . finds that Reorganization Plan No. 1 of 1953, provides for a special assistant to the Secretary for Health and Medical Affairs. This provision is a step in the right direction which should result in centralized co-ordination under a leader in the medical field of the health activities of the proposed department. Health, therefore, is given a special position. The proposed plan, properly administered, will permit more effective coordination and administration of the health activities of the new Department without interference or control by other branches.

"Previous attempts to raise the Federal Security Agency from an independent agency to the level of an Executive Department have been opposed by the Association because the plan did not meet these aims."

Reaffirms Old Stand

Although the House of Delegates supported Eisenhower's new plan, it firmly stated its preference for a completely independent Department of Health: "The Board of Trustees recommends that the House of Delegates reaffirm its stand in favor of an independent Department of Health but that it support the Reorganization Plan No. 1 of 1953, as being a step in the right direction; that the American Medical Association cooperate in making the plan successful and that it watch its development with great care and interest."

Reservation Included

The statement passed by the House also presented, in no uncertain terms, a reservation of the right to make recommendations to amend any part of the creative legislation which does not live up to certain principles:

"It should be understood, however, that the Association reserves the right to make recommendations for amendment of the then existing law or to press for the establishment of an independent Department of Health, if the present plan does not, after a sufficient length of

time for development, result in proper advancement in and protection of health and medical science and in their freedom from political control."

General agreement exists that the House of Delegates made a wise decision by passing this resolution. The very fact that the medical profession literally reversed itself in this matter, should prove that physicians as an organized group do not always take a negative position, and that when they believe in something, they take action to protect it. Dr. Bauer summed up by saying, "Now . . . we shall be embarking on a new sea of adventure, and I believe the medical profession of the United States can wield a constructive influence on the health of the American people. I am sure that we shall have every possible cooperation from Washington. The address of the President of the United States to the House of Delegates certainly assured us of that."

AMA MEETING PLANNED FOR NEW YORK

The 102nd annual meeting of the American Medical Association is scheduled for June 1-5, in New York. According to the *Journal of the American Medical Association* announcing the meeting, there will be over 400 scientific papers, 260 scientific exhibits, 370 technical exhibits and daily motion picture and television programs. All major specialties in medicine will be represented on the program in some one of the twenty sections.

The exhibits will be located on four adjacent floors of New York's Grand Central Palace. The general meetings of the Scientific Assembly will take place at the Commodore Hotel. The color television will originate from operating rooms and clinics of the New York Hospital and will be viewed on two 5x6 foot screens in the Hendrick Hudson room of the Roosevelt Hotel. The American Medical Association House of Delegate sessions will be held in the Grand Ballroom of the Waldorf-Astoria Hotel.

Social and sports events have been arranged, as usual, and all Association members are invited to participate in these functions. Auxiliary meetings are scheduled in conjunction with the doctors' meetings. Complete detailed accounts of meeting arrangements will be found in the April 11 issue of the *Journal of the American Medical Association*.

NATIONAL HEALTH COUNCIL REVIEWS COMMISSION REPORT

Delegates to the National Health Council meeting in New York on March 19, considered the report of the President's Commission on the Health Needs of the Nation. The Council is made up of some forty member organizations, of which the American Medical Association is one. Of late there has been considerable doubt about the general tone of the statements of the Council, and, as a result, some member groups have withdrawn support.

The meeting was divided into groups, each considering certain phases of the commission's report: "Paying the Bill for Personal Health Services," "Meeting the Needs for Health Personnel," "Building Better Health Facilities," "Organizing Health Services More Effectively," and "Fostering Research for Better Health."

The meeting was well attended, and interest ran high—especially in the group whose topic was devoted to financial considerations in medical care. The discussion was thorough, and much objection was evident over the general statements and conclusions of the Commission. There was sentiment that the Commission had failed to close the door to consideration of compulsory health insurance as an answer to health needs problems, even though individual Commission members had supposedly expressed opposition to it.

The meeting, lively as it was, passed no official sanction or denunciation of the report of the President's Commission on the Health Needs of the Nation. Representatives from the American Medical Association and from many state medical associations were in attendance, and their opinions and ideas about the report were strongly expressed and accepted by the conference as a whole.

FEDERAL GOVERNMENT UNDERWRITES INSURANCE

The United States' government is in the insurance underwriting business—not underwriting insurance for its own activities, but doing it for risks to which private property and private business activities are exposed.

According to a recent issue of "Insurance Economics Surveys" the government is conducting eleven major insurance operations, spread over the fields of life insurance, pensions, financial guarantees and property insurance of all kinds. The report states:

"The liability which the Federal Government has assumed to pay death benefits under the social security law is greater than the entire amount of private life insurance in force, while the Government's liability to pay pensions under social security is estimated at 10 to 15 times greater than all of the annuity business on the books of the private insurance companies."

It is also interesting to note, the report states, that the taxes collected by the social security system for these two kinds of benefits are little more than one-third of the amount of premium income collected by the private life insurance companies.

The report quotes the eleven fields of government underwriting activities as:

1. Life insurance for men in the armed services and veterans.
2. Marine and aviation war risk insurance.
3. Old age and survivors' insurance.
4. Railroad employees' retirement system.
5. Civil service employees' retirement system.
6. Unemployment compensation.
7. Federal employees' compensation
8. Crop insurance.
9. Insurance of commodities under Commodity Credit Corporation loans.
10. Guarantees of bank and other depositories.
11. Guarantees of mortgage loans.

VACCINES NOT PROVED

Poliomyelitis vaccines must be proved both effective and safe before public health authorities will be convinced of their acceptability. No polio vaccine has yet been proved both effective and safe, nor can the safety of such a vaccine be determined until it has been tested on a large enough group—preferably from 50,000 to 70,000 children. There are three distinct strains of polio virus, and no vaccine available at present will protect against all three. A really safe vaccine must be safe for the unusual individual, not merely for the majority. A vaccine that is safe for only 990 children out of a thousand is "worse than a polio epidemic."

These were some of the comments made by Dr. Gaylord W. Anderson, director of the School of Public Health, University of Minnesota, speaking at Hennepin County Health Day on "Can We Prevent Polio?" Ultimate solution of the polio problem will probably be a vaccine, said Dr. Anderson, but he added that "our hopes have been raised a bit prematurely." It is unlikely, he added, that either a safe vaccine or sufficient supplies of gamma globulin for preventing or modifying the effects of polio will be available in the near future.—*Minnesota's Health*, March, 1953.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

230 Lowry Medical Arts Bldg., Saint Paul, Minnesota

Julian F. Du Bois, M.D., Secretary

PHYSICIANS LICENSED FEBRUARY 15, 1952

January, 1952, Examination

Name	School	Address
AARO, Leonard Arthur	Northwestern U. MD 1950	1117 N. Main, Aberdeen, S. D.
AKEY, Robert McKinley	U. of Kansas MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
BLANSHARD, Thomas Paul	U. of London, England Bach. of Med. & Surg. 1939 MD 1947	Kaiser-Fontana Hosp., Fontana, Cal.
CAMPBELL, Malcom Kruse	U. of Iowa MD 1948	Malvern, Iowa
COHEN, Morley	U. of Manitoba MD 1948	U. of Minn. Hosp., Minneapolis, Minn.
FORTNER, Jr., Edgar Sidney	U. of Oregon MD 1951	Sacramento City Hosp., Sacramento, Cal.
FRASER, Robert Stewart	U. of Alberta MD 1946	U. of Minn. Hosp., Minneapolis, Minn.
LARSON, Roger Clarence	U. of Minnesota MB 1950 MD 1951	Columbia Hosp. for Women, Wash., D. C.
MENSHEHA, Nicholas	U. of Lemberg & "Physician" U. of Munich, Germany 1949	Forest Lake, Minn.
MOYER, Jr., Ralph David	Jefferson Med. Col. MD 1950	509 2nd Ave., Two Harbors, Minn.
RICHARDS, Albert Gerald	U. of Alberta MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
STRUXNESS, David F.	U. of Minnesota MB 1951	Alexandria, Minn.
TAUBER, Allan Swartz	U. of Toronto MD 1943	U. of Minn. Hosp., Minneapolis, Minn.
THYSELL, Harold Robert	U. of Minnesota MB 1951	119 N. Broadway, Crookston, Minn.
WACK, Mary Margaret	Marquette U. MD 1950	416 22nd Ave. S., Minneapolis, Minn.
WEST, Robert Kooper	U. of Minnesota MB 1951	Mpls. Gen. Hosp., Minneapolis, Minn.
WORTHEN, Howard George	Northwestern U. MD 1951	U. of Minn. Hosp., Minneapolis, Minn.

Reciprocity Candidates

Name	School	Address
BARR, Jr., James Howard	Western Reserve U. MD 1943	1009 Nicollet Ave., Minneapolis, Minn.
BERNSTEIN, Dorothy Milzer	U. of Colorado MD 1949	U. of Minn. Health Service, Mpls., Minn.
BUCKLEY, Lawrence Robert	U. of Nebraska MD 1950	Miller Hospital, St. Paul, Minn.
COLLINS, Loren Edwin	Creighton U. MD 1934	102-110 2nd Ave. S.W., Rochester, Minn.
CONNELLY, Michael E.	U. of Pittsburgh MD 1939	102-110 2nd Ave. S.W., Rochester, Minn.
COUNTS, Robert Noble	U. of Virginia MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
CRUMBLEY, Jr., James Jernigan	U. of Georgia MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
DEAN, David Lea	U. of Wisconsin MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
DOBKIN, Allen Benjamin	U. of Toronto MD 1949	U. of Minn. Hosp., Minneapolis, Minn.
DWYER, Jr., William Edward	Western Reserve U. MD 1943	102-110 2nd Ave. S.W., Rochester, Minn.
GOULD, Purdue Leighton	Washington U., Mo. MD 1948	U. of Minn. Hosp., Minneapolis, Minn.
HENN, Mary Josephine	U. of Nebraska MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HRANILOVICH, George T.	Loyola U. MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
KARAVITIS, Andrew Lee	U. of Utah MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
KOEFOOT, Richard Bruce	U. of Nebraska MD 1950	Miller Hospital, St. Paul, Minn.
LACY, Paul Eston	Ohio State U. MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
McCANTS, Ralph Samuel	U. of Oklahoma MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
McKEE, Robert Earl	U. of Pittsburgh MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
MORRISON, Samuel Slemmons	Harvard U. MD 1947	102-110 2nd Ave. S.W., Rochester, Minn.
PETERS, Myra Ann	U. of Alabama MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
PETTET, Jacqueline Dorothea	U. of So. Calif. MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
PITCHFORD, Jr., Clyde Alfred	Stanford U. MD 1945	3764 12th St., Riverside, Cal.
ROSS, Paul J.	U. of Louisville MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
TORGHELE, John Ray	U. of Utah MD 1946	State Hosp., Hastings, Minn.

National Board Candidates

Name	School	Address
CAMPBELL, Charles Garnet	U. of Michigan MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
DOLPHIN, James Aloysius	Tufts Col. Sch. Med. MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
EGDAHL, Richard Harrison	Harvard U. MD 1950	Route 1, Eau Claire, Wis.
ERICKSON, John Gordon	Queen's U. MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.

MAY, 1953

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MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

HOFFMAN, II, Harry Natt	Creighton U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
JOHNSON, Angelo Gordon	Syracuse U.	MD 1944	102-110 2nd Ave. S.W., Rochester, Minn.
OMINES, Janine Yolande	New York Med. Col.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
ROWELL, Jr., Forrest Ardell	Tufts Med. Col.	MD 1938	Thief River Falls, Minn.
SCHWARZ, Bert Eric	New York U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
TARANTINO, Joseph Carl	Tufts Col. Sch. Med.	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
WEIDMAN, William Harry	U. of Colorado	MD 1947	102-110 2nd Ave. S.W., Rochester, Minn.
WOOD, William Warren	Harvard U.	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.

PHYSICIANS LICENSED MAY 15, 1952

April, 1952, Examination

Name	School		Address
ANTEL, John Joseph	U. of Chicago	MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
ARMS, James John	Marquette U.	MD 1951	6224 Lyndale Ave. S., Minneapolis, Minn.
ATNIKOV, Murray Gerald	U. of Manitoba, Can.	MD 1950	U. of Minn. Hosp., Minneapolis, Minn.
BACON, John Louis	U. of Maryland	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
BERRIS, Harold	U. of Toronto	MD 1949	1620 3rd Ave. S., Minneapolis, Minn.
BESSE, Jr., Byron Earl	Jefferson Med. Col.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
BOLIN, Robert Cornwall	U. of Utah	MD 1946	Vet. Adm. Hospital, Minneapolis, Minn.
BRANDENBURG, John Tunis	Northwestern U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1951	
BROWN, Cyrus Cathey	Harvard U.	MD 1950	Vet. Adm. Hospital, Minneapolis, Minn.
BURCHAM, Jr., Thomas Addison	Washington U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
CHELTON, Louis Guy	U. of Maryland	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
COSERIU, Vasile Gregory	U. King Ferdinand	MD 1946	1225 St. Germain St., St. Cloud, Minn.
	Cluj, Rumania		
DORSEY, Cletis Stewart	Northwestern U.	MD 1944	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1945	
GEE, Vernon Ray	Northwestern U.	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1947	
GORDON, John Jegi	Creighton U.	MD 1950	405 W. Clinton, Indianola, Iowa
HAMILTON, Jr., Warren W.	U. of Buffalo	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HARLINE, Wesley Grant	Temple U.	MD 1945	3410 S. 11th E., Salt Lake City, Utah
HENDRICKS, Everett Dale	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HENEKS, Helen I. Andreasen	U. of Iowa	MD 1951	Pequot Lakes, Minn.
HENSON, Jr., Stanley Willard	U. of Maryland	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HERNDON, Richard Fleetwood	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1951	
HOLT, Fleurene Podolle	Syracuse U.	MD 1950	44 A. Rose Terrace, Ft. Knox, Ky.
HUMPHREY, Edward William	U. of Minn.	MD 1951	10 N. 5th St., Moorhead, Minn.
		MD 1952	
JEREMIAS, Martin Tiberiu	Queen's U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
KASALES, Clarence John	Temple U.	MD 1946	Flourtown P. O. Bldg., Flourtown, Pa.
KELN, Andrew	McGill U.	MD 1943	102-110 2nd Ave. S.W., Rochester, Minn.
KOONS, Wilbur Robert	Northwestern U.	MD 1950	Sasse Bldg., Lidgerwood, No. Dak.
		MD 1951	
KOVACK, Freeman D.	Ludwig-Maximilians	"Phys."	333 Med. Arts Bldg., Mpls., Minn.
	Munich, Germany	2-13-47	
		MD 1948	
LANDSTRA, Robert Frank	U. of Michigan	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
LAPP, Paul Ward	U. of Toronto	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
LYZENGA, Anton Gerald	U. of Michigan	MD 1951	Ancker Hospital, St. Paul, Minn.
McKIBBEN, Helena	Johns Hopkins U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
MANKIN, Harold Turner	Johns Hopkins U.	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
MISHEK, Charles Joseph	Marquette U.	MD 1951	1698 Lexington Ave., St. Paul, Minn.
NIELSEN, Ray Hammond	U. of Pennsylvania	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
NYHUS, Ralph Ekle	U. of Minnesota	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
RAMIREZ de ARELLANO, Alfredo A.	Harvard U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
RINGER, Jr., Merritt Gartley	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
RIPEPI, James D.	Jefferson U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
ROBINSON, David Bancroft	U. of Pennsylvania	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
ROGERS, Arnold Gerald	U. of Manitoba	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
THOMPSON, Jr., J. Lawn	George Washington U.	MD 1936	1714 N. St., N.W., Washington, D. C.
VOGELE, Alvin C.	Temple U.	MD 1951	Vet. Adm. Hospital, Denver, Colo.
WEBER, Robert George	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
WILKINSON, Jr., George Richard	Johns Hopkins U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.

Reciprocity Candidates

Name	School		Address
BADER, Jean Lyon	U. of Nebraska	MD 1951	Slayton, Minn.
CLARKE, John Whitlock	U. of Louisville	MD 1951	Watertown, Minn.
CRAIG, Richard Morton	U. of Indiana	MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
DEGNER, Albert Frederick	U. of Nebraska	MD 1947	Admiral Bldg., Bremerton, Wash.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

FRERICHS, Cletus Troy	U. of Nebraska	MD 1947	102-110 2nd Ave. S.W., Rochester, Minn.
GARRETT, Jr., Charles Melvin	Med. Col. of Va.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
GRIFFIN, Jr., John Wheeler	Columbia U.	MD 1940	522 Beltrami Ave., Bemidji, Minn.
GROSH, John Livingston	Temple U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HAIGLER, Jr., Frank Haldane	U. of Illinois	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
McELWEE, Mary Louise	U. of Oklahoma	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
NISIUS, George Fred	Loyola U.	MD 1942	205 W. 2nd St., Duluth, Minn.
PAINTER, Robert Henry	Jefferson Med. Col.	MD 1950	Two Harbors, Minn.
PARKER, Philip John	Jefferson Med. Col.	MD 1942	109 Labree Ave. S., Thf. Rvr. Fls., Minn.
SAWTELL, Robert Rhyle	U. of Nebraska	MD 1951	Jeffers, Minn.
SMITH, Lowell Ralph	U. of Iowa	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
STOLTZ, Robert Charles	Marquette U.	MD 1945	711 Phys. & Surg. Bldg., Mpls., Minn.
THOMAS, Lewis	Harvard U.	MD 1937	U. of Minn. Heart Hosp., Mpls., Minn.
TYLER, Donald Earl	U. of Oregon	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
UTZ, David Charles	St. Louis U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
ZIMMER, James Francis	Marquette U.	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.

National Board Candidates

Name	School	Address
KROEKER, Edwin John	McGill U.	MD 1947 102-110 2nd Ave. S.W., Rochester, Minn.
LEUALLEN, Edmund Curtis	U. of Pennsylvania	MD 1946 102-110 2nd Ave. S.W., Rochester, Minn.
SCHOLER, John Frederick	Johns Hopkins U.	MD 1950 102-110 2nd Ave. S.W., Rochester, Minn.
SILVER, Arthur Wexler	Hahnemann Med. Col.	MD 1950 102-110 2nd Ave. S.W., Rochester, Minn.
SMITH, Orson Pratt	Long Island Col.	MD 1947 Vet. Adm. Hospital, Minneapolis, Minn.

PHYSICIANS LICENSED JULY 18, 1952

June, 1952, Examination

Name	School	Address
ANDERSON, Richard Robert	U. of Minnesota	MB 1952 Good Samaritan Hosp., Portland, Ore.
ANDERSON, Roger Eugene	U. of Minnesota	MB 1952 Mary Hitchcock Mem. Hosp., Hanover, N. H.
ANDERSON, Roger Lewis	U. of Minnesota	MB 1951 Penney Bldg., Detroit Lakes, Minn.
BARNES, Richard E.	U. of Minnesota	MB 1952 Santa Clara Hosp., San Jose, Cal.
BENTZ, Herman Duane	U. of Minnesota	MB 1952 Denver General Hosp., Denver, Colo.
BLOOM, Sanford	U. of Minnesota	MD 1951 Gladewater, Texas
BONNER, John Lawrence	U. of Minnesota	MB 1952 St. Luke's Hospital, Duluth, Minn.
BOUMA, John H.	U. of Minnesota	MB 1952 2221 Madison Ave., Toledo, Ohio
BOWES, Donald Earl	Queen's U.	MD 1950 102-110 2nd Ave. S.W., Rochester, Minn.
BROCKWAY, Roger Warren	U. of Minnesota	MB 1952 St. Luke's Hospital, Duluth, Minn.
BROWN, Marshall Francis	U. of Minnesota	MB 1952 Providence Hospital, Portland, Ore.
CANINE, James Lee	U. of Minnesota	MB 1952 Ancker Hospital, St. Paul, Minn.
CARLSON, Vernon John	U. of Minnesota	MB 1951 10 N. 5th St., Moorhead, Minn.
CHILD, Sherman Bradford	U. of Minnesota	MB 1952 Sacramento Co. Hosp., Sacramento, Cal.
CHUNG, Gloria Ru-Wen Wong	U. of Minnesota	MD 1949 29-56 172nd St., Flushing 58, L. I., N. Y.
CLOUGH, John	Washington U., Mo.	MD 1944 4 Chestnut St., Massena N. Y.
COPELAND, Norman B.	Marquette U.	MD 1951 St. Mary's Hospital, Duluth, Minn.
DE COSSE, Jerome Joseph	U. of Minnesota	MB 1952 Roosevelt Hospital, New York, N. Y.
DE GEEST, James Henry	U. of Minnesota	MB 1952 508 Univ. Village, Minneapolis, Minn.
DIAMOND, Norman Jack	U. of Minnesota	MB 1952 USPHS Hospital, Seattle, Wash.
DOKKEN, James Hetherington	U. of Minnesota	MB 1952 Mt. Sinai, Hosp., Minneapolis, Minn.
DOUVILLE, Elmer Louis	U. of Ottawa	MD 1951 102-110 2nd Ave. S.W., Rochester, Minn.
EILERS, Russell Jay	U. of Minnesota	MB 1952 Vet. Adm. Hospital, Long Beach, Cal.
ERICKSON, Vernon Douglas	U. of Minnesota	MB 1952 Cleveland City Hosp., Cleveland, Ohio
FALLON, Virgil Thomas	U. of Minnesota	MB 1952 Mary Hitchcock Mem. Hosp., Hanover, N. H.
FERRAND, Paula Thon	Jan Kazimierz U.	Dr. of Med. '25 State Hospital, Moose Lake, Minn.
FETZEK, Albert David	U. of Minnesota	MB 1952 Mpls. Gen. Hosp., Minneapolis, Minn.
FOX, Donald Peter	U. of Minnesota	MB 1952 Mpls. Gen. Hosp., Minneapolis, Minn.
GALEJS, Aina	Baltic U. and U. of Hamburg, Germany	Dr. of Med. 1951 Mpls. Gen. Hosp., Minneapolis, Minn.
GAMBLE, Elbert John	U. of Minnesota	MB 1952 Ancker Hospital, St. Paul, Minn.
GARDNER, Jr., Victor Hugo	U. of Iowa	MD 1951 322 Blue Earth Ave., Fairmont, Minn.
GENRICH, Jeanne Frances	Marquette U.	MD 1951 St. Mary's Hospital, Duluth, Minn.
GILBERTSEN, Ada Sigrid	U. of Minnesota	MB 1952 U. of Minn. Hosp., Minneapolis, Minn.
GILBERTSEN, Victor Adolph	U. of Minnesota	MB 1952 U. of Minn. Hosp., Minneapolis, Minn.
GOLDBERG, Marvin Eleazer	U. of Minnesota	MB 1952 Mpls. Gen. Hospital, Minneapolis, Minn.
GOOD, Roy Herbert	U. of Minnesota	MB 1952 Mpls. Gen. Hospital, Minneapolis, Minn.
GRAY, Edward Francis	Marquette U.	MD 1951 698 3rd St., White Bear Lake, Minn.
GRIMMELL, Francis John	U. of Minnesota	MB 1952 Mt. Sinai Hospital, Minneapolis, Minn.
GROHS, William Hunter	U. of Minnesota	MB 1952 St. Luke's Hospital, Duluth, Minn.
GUSTAFSON, Paul O.	U. of Minnesota	MB 1952 St. Joseph's Hospital, St. Paul, Minn.
HAAS, Jack Frederick	U. of Minnesota	MB 1952 Ancker Hospital, St. Paul, Minn.

MAY, 1953

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MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

HANSON, Mildred Schaffer	U. of Minnesota	MB 1951 MD 1952	427 LaSalle Bldg., Minneapolis, Minn.
HARRIS, Charles Lee	U. of Minnesota	MB 1952	Memorial Hospital, Phoenix, Ariz.
HARRIS, Charles Rupert	Baylor U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HAVESON, Samuel Bernard	U. of Minnesota	MB 1952	San Francisco Hosp., San Francisco, Cal.
HEDENSTROM, Paul Henry	U. of Minnesota	MB 1952	St. Luke's Hospital, Duluth, Minn.
HEDINE, Duane Rodney	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
HEEGAARD, William Goddard	U. of Minnesota	MB 1952	Baltimore City Hosp., Baltimore, Md.
HEMPEL, Dean Jacob	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
HENEKS, William Eugene	U. of Iowa	MD 1951	Box 706, Pequot Lakes, Minn.
HENKE, Charles P.	Northwestern U.	MB 1944 MD 1945	Shipman Hospital, Ely, Minn.
HENRY, Kenneth George	U. of Minnesota	MB 1952	Ancker Hospital, St. Paul, Minn.
HESLA, Inman Adolph	U. of Texas S.W. Med. Sch.	MD 1951	209 W. Mill St., Austin, Minn.
HUELSKAMP, Margaret	U. of Minnesota	MB 1949 MD 1950	10030 Story Road, San Jose, Cal.
HUPPLER, Edward G.	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
HUSTAD, Edward Gerald	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
JACKSON, William Charles	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
JOHNSON, Carolyn Adair	U. of Minnesota	MB 1952	Chas. T. Miller Hospital, St. Paul, Minn.
JOHNSTON, Henry Wayne	U. of Minnesota	MB 1952	St. Luke's Hospital, Duluth, Minn.
JONES, Donald A.	U. of Minnesota	MB 1952	Denver Gen. Hospital, Denver, Colo.
KLASS, Donald William	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
KOENIG, Robert Peter	U. of Minnesota	MB 1952	Ancker Hospital, St. Paul, Minn.
KRAGH, Lyle Vernon	U. of Minnesota	MB 1952	130 N. 8th Ave. E., Duluth, Minn.
KUNKEL, Melvin George	U. of Toronto	MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
LEE, Gordon Eugene	U. of Minnesota	MB 1952	Milwaukee Co. Hosp., Milwaukee, Wis.
LEIFERMAN, Robert Joseph	U. of Minnesota	MB 1952	USAF Letterman Army Hospital, San Francisco, Cal.
L'ESPERANCE, Bernard Francis	U. of Ottawa	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
LETSON, Robert D.	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
LINDBLOM, Maurice L.	U. of Minnesota	MB 1952	Detroit Receiving Hosp., Detroit, Mich.
LISTERUD, Mark Boyd	U. of Minnesota	MB 1952	King Co. Hospital System, Seattle, Wash.
LITMAN, Arthur Gene	U. of Minnesota	MB 1952	Jackson Mem. Hospital, Miami, Fla.
LOMMEL, Jerome G.	U. of Minnesota	MB 1952	Grasslands Mem. Hosp., Valhalla, N. Y.
LYNGE, Harold Norman	McGill U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
McGREGOR, Gordon William	U. of Minnesota	MB 1952	Oakland Naval Hosp., Oakland, Cal.
McHARDY, Bryson Roy	U. of Minnesota	MB 1952	St. Barnabas Hosp., Minneapolis, Minn.
MALERICH, Jr., J. Anthony	U. of Minnesota	MB 1952	Ancker Hospital, St. Paul, Minn.
MALLINGER, Ralph Henning	U. of Minnesota	MB 1952	San Bernardino Co. Charity Hospital, San Bernardino, Cal.
MATSUMOTO, Kenneth K.	U. of Minnesota	MB 1952	San Diego Naval Hosp., San Diego, Cal.
MAYBERG, Donald MacMillan	U. of Minnesota	MB 1952	Madigan Gen. Hosp., Ft. Lewis, Tacoma, Wash.
MOLZAHN, Clifford Douglas	U. of Minnesota	MB 1952	Orange Co. Gen. Hosp., Orange, Cal.
MONNAHAN, James Raymond	U. of Minnesota	MB 1952	Latter-day Saints Hosp., Salt Lake City, Utah
MUELLER, Donald Robert	U. of Minnesota	MB 1952	St. Mary's Hospital, Duluth, Minn.
MURRAY, Roger Cawley	U. of Minnesota	MB 1952	Mary Hitchcock Memorial Hosp., Hanover, N. H.
MUSKE, Marvin Marshall	U. of Minnesota	MB 1952	Milwaukee Co. Hosp., Milwaukee, Wis.
MYRICK, Floyd Forrest	U. of Minnesota	MB 1952	King Co. Hospital System, Seattle, Wash.
NARVERUD, Raymond Arthur	U. of Minnesota	MB 1952	Columbia Hosp., Columbia, S. Car.
NELSON, Charles Henry	U. of Minnesota	MB 1950 MD 1951	Vet. Adm. Hospital, Minneapolis, Minn.
NELSON, Robert Harry	U. of Minnesota	MB 1952	St. Luke's Hospital, Duluth, Minn.
NELSON, Wilhma Bowman	U. of Minnesota	MB 1952	5125 39th Ave. S., Minneapolis, Minn.
PAYNE, Richard Erling	U. of Minnesota	MB 1952	Good Samaritan Hosp., Portland, Ore.
PHELAN, John Thomas	Marquette U.	MD 1947	102-110 2nd Ave. S.W., Rochester, Minn.
PONE, Janis	U. of Latvia, Riga, Latvia	"Physician" 1926	Silver Lake, Minn.
PRILINA, Isaac Michael	U. of Minnesota	MB 1952	Vet. Adm. Hospital, Long Beach, Cal.
REED, Sheldon Cooper	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
ROACH, Donald Edson	U. of Minnesota	MB 1952	1821 6th Ave. Apt. 302, Oakland, Cal.
ROTENBERG, Robert Julius	U. of Minnesota	MB 1952	Ancker Hospital, St. Paul, Minn.
ROYCE, Paul Chadwick	U. of Minnesota	MB 1952	950 E. 59, Chicago, Ill.
SAMET, Charles Merle	U. of Minnesota	MB 1952	Boston City Hospital, II Med. Service, Boston, Mass.
SCALLEN, Raymond Wallace	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
SCALLON, Joseph Edward	U. of Minnesota	MB 1952	Vet. Adm. Hospital, Long Beach, Cal.
SCHAFFHAUSEN, Irwin Francis	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
SCHAFFHAUSEN, Mildred Jane	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
SCHWARTZ, Daniel Phillip	U. of Minnesota	MB 1952	U. S. Marine Hosp., Stapleton, N. Y.
SHAVER, Ward Allison	U. of Manitoba	MD 1944	418 E. Vernon Ave., Fergus Falls, Minn.
SHRAGG, Robert I.	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
SKAIFE, William Francis	Albany Med. Col.	MD 1951	105½ 1st St. S.E., Little Falls, Minn.
SMITH, Nadine Genet	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

SMITH, Richard Thomas
SOMMERDORF, Vernon Lyle
SPENCER, Jean Aileen
SPRINGER, Elliott B.
STRAUCHLER, Jona

SWENDSEEN, Carl Johan
SWENSON, Donald Burton
TESTOR, James Vincent
VENNES, Jack Anderson
VITOLS, Teodors Mikelis

WITTELS, Benjamin
WITTHAUS, Melvyn E.
WOHLRABE, John Clarence
WYATT, Jr., Arthur Jacob

Tulane U. MD 1950
U. of Minnesota MB 1952
U. of Chicago MD 1950
U. of Minnesota MB 1952
U. of Zurich, Switzerland MD 1935
U. of Minnesota MB 1952
U. of Minnesota MB 1952
U. of Minnesota MB 1952
U. of Minnesota MB 1951
U. of Latvia "Physician" 11-9-35
Riga, Latvia MB 1952
U. of Minnesota MB 1952
U. of Minnesota MB 1952
U. of Minnesota MB 1952

U. of Minn. Hosp., Minneapolis, Minn.
Ancker Hospital, St. Paul, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
Mpls. Gen. Hospital, Minneapolis, Minn.
Belview, Minn.

Mpls. Gen. Hospital, Minneapolis, Minn.
Milwaukee, Co. Hosp., Milwaukee, Wis.
St. Joseph's Hospital, St. Paul, Minn.
Vet. Adm. Hosp., Minneapolis, Minn.
1407 7th St. S.E., Minneapolis, Minn.

Gallinger Hosp., Washington, D. C.
Mpls. Gen. Hospital, Minneapolis, Minn.
Memorial Hospital, Phoenix, Ariz.
Queen's Gen. Hospital, Jamaica, N. Y.

Reciprocity Candidates

Name	School	Year
BURNETT, Jr., Clem Fitch	Med. Col. of Va.	MD 1947
CAMPBELL, Donald Keith	U. of Iowa	MD 1950
CLARK, Edward Cargile	Western Reserve U.	MD 1943
DAVIS, Donald Raymond	Temple U.	MD 1946
DUMMER, Donald Joseph	Creighton U.	MD 1951
FLY, Jr., Orceneth Asbury	U. of Texas	MD 1946
IRWIN, Homer Russell	U. of So. Cal.	MD 1947
JASTRAM, Rupert Mitchell	U. of Nebraska	MD 1951
JUHL, John Harold	U. of Michigan	MD 1940
KAISER, Milton Lee	U. of Nebraska	MD 1951
KINCAID, Owings Wilson	U. of Louisville	MD 1946
McILHANY, Mary Lou	Vanderbilt U.	MD 1950
MILLER, William Jacob	Indiana U.	MD 1945
ODLAND, Olin Matthew	U. of Nebraska	MD 1950
SCHUTZ, John Charles	U. of Nebraska	MD 1951
SEIDELL, Martin Ambrose	Indiana U.	MD 1946
SIMPSON, Jr., Harry M.	Med. Col. of Ala.	MD 1950
SIVERTSON, Sigurd E.	U. of Wisconsin	MD 1947
WISE, Robert Irby	U. of Texas	MD 1950

Address
220 S. Broadway, Crookston, Minn.
421 N. 9th St., Oskaloosa, Ia.
102-110 2nd Ave. S.W., Rochester, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
New Brighton, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
Hibbing Gen. Hospital, Hibbing, Minn.
Northwestern Hosp., Minneapolis, Minn.
604 Med. Arts Bldg., Minneapolis, Minn.
118½ N. Minn. St., New Ulm, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
Granite Falls, Minn.
Eden Valley, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
102-110 2nd Ave. S.W., Rochester, Minn.
U. of Minn. Hosp., Minneapolis, Minn.

National Board Candidates

Name	School	Year	Address
DAVIS, Harry Louis	U. of Illinois	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
GILBERT, Jr., Robert Lincoln	Yale U.	MD 1941	1707 Main St., La Crosse, Wis.
KENNEDY, Byrl James	U. of Minnesota	MD 1945	U. of Minn. Hosp., Minneapolis, Minn.
		MD 1946	
KITTLESON, Kenneth Dale	Columbia U.	MD 1947	Vet. Adm. Hospital, Downey, Ill.
KRAFCHUK, John	Long Island Col. of Med.	MD 1944	U. of Minn. Hosp., Minneapolis, Minn.
KURLAND, Leonard Terry	U. of Maryland	MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
PIERCE, Edgar Harris	Emory U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
PLUCKER, Milton Wallace	U. of Nebraska	MD 1951	Clarkfield, Minn.
RUGGIERI, Bartholomew Albert	N. Y. U. Med. Col.	MD 1945	102-110 2nd Ave. S.W., Rochester, Minn.
SMILLIE, II, John Wilson	Cornell U.	MD 1943	U. of Minn. Hosp., Div. of Ophthalmology, Minneapolis, Minn.
TUCKER, Jolyon Simeon	U. of Minnesota	MB 1948	926 St. Clair Ave., St. Paul, Minn.
		MD 1949	
WEISS, Carl Adolph	McGill U.	MD 1932	Radabaugh Bldg., Hastings, Minn.

PHYSICIANS LICENSED NOVEMBER 21, 1952

October, 1952, Examination

Name	School	Year	Address
ALLEN, Raymond Archie	U. of Louisville	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
BAKER, Donald Bruce	U. of Alberta	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
BERNHISEL, Harris Glenn	U. of Utah	MD 1948	7426 Stevens Ave. S., Minneapolis, Minn.
CARTHEY, Frank Joe	U. of Minnesota	MB 1952	Mpls. Gen. Hospital, Minneapolis, Minn.
CEDARLEAF, Shirley Joan	U. of Minnesota	MB 1951	U. of Minn. Hospitals, Dept. Anesth., Minneapolis, Minn.
		MD 1952	
COLLINS, Robert Earl	Marquette U.	MD 1951	1303 S. Phillips Ave., Sioux Falls, S. D.
COSTELLO, Addis Clement	Marquette U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
COURSLEY, Gerald	U. of Manitoba	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
CUTLER, Edward	Hahnemann Med. Col.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
DANYLUK, Michael	Ludwig Maximilian U., Munich, Germany	MD 1950	837 Med Arts Bldg., Minneapolis, Minn.
DAVIS, Jr., Arthur Emerson	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
DOE, Richard Philip	U. of Minnesota	MB 1951	Vet. Adm. Hospital, Minneapolis, Minn.
		MD 1952	

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

DOEHLERT, Jr., Charles Alfred	U. of Pennsylvania	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
DUQUETTE, Jacques	U. of Montreal	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
EDWARDS, Robert Valentine	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
EELKEMA, Herman Harrison	U. of Minnesota	MB 1952	St. Joseph's Hospital, St. Paul, Minn.
FLOM, Robert Stanley	Northwestern U.	MD 1951	Echo, Minn.
GODDEN, John Oakley	Dalhousie U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
GOOD, Thomas Arnold	U. of Minnesota	MB 1951	Mpls. Gen. Hospital, Minneapolis, Minn.
		MD 1952	
GRACE, Joseph Bernard	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HOUTS, Joseph Claude	U. of Minnesota	MB 1951	501 Pleasant Ave., Crookston, Minn.
		MD 1952	
HUGHES, Robert Alexander	U. of Western Ontario	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
JOHNSON, Charles Mabin	U. of Pennsylvania	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
KELLEY, John Hoyt	Northwestern U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
LEEK, Joseph Hugh	U. of Michigan	MD 1948	205 W. 2nd St., Duluth, Minn.
McCLURE, Jr., Rensselaer Wright	U. of Kansas	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
MOLNAR, George Dempster	U. of Alberta	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
MOORE, Christopher Halliday	U. of Manitoba	MD 1941	102-110 2nd Ave. S.W., Rochester, Minn.
MURRAY, Gordon MacGregor	Dalhousie U.	MD 1944	Sunnybrook Hospital, Toronto, Ont., Can.
OLSON, Donald Lawrence	U. of Minnesota	MB 1950	Vet. Adm. Hospital, Minneapolis, Minn.
		MD 1951	
PEAKE, III, Charles Orlando	U. of Pennsylvania	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
PORRETTA, Charles Anthony	U. of Michigan	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
RICHARDS, Frances Mary Forrest	U. of Alberta	MD 1951	State Hospital, Rochester, Minn.
SHIRAI, Shohei	Col. of Medical Evangelists	MD 1952	1124 Lowry Med. Arts Bldg., St. Paul, Minn.
SWARTZLANDER, Frank Carver	U. of Manitoba	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
TAUB, Robert Golde	Northwestern U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
WRIGHT, J. Leo	State U. of N. Y.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.

Reciprocity Candidates

Name	School		Address
BOREN, James Alan	Northwestern U.	MB 1947	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1948	
BURNETT, Joseph William	Hahnemann Med. Col.	MD 1942	618 N. Union, Fergus Falls, Minn.
DAVID, Reuben	U. of Nebraska	MD 1951	732 Chicago Ave., Minneapolis, Minn.
DAWSON, Lorin Drexel	U. of Wisconsin	MD 1942	1653 Med. Arts. Bldg., Mpls., Minn.
DYKSTRA, Peter Calvin	U. of So. Cal.	MD 1952	102-110 2nd Ave. S.W., Rochester, Minn.
FARRAR, Turley	U. of Tennessee	MD 1939	102-110 2nd Ave. S.W., Rochester, Minn.
GACUSANA, Jose Miranda	Creighton U.	MD 1932	Mahnomen, Minn.
GIUSEFFI, Jr., Vincent Joseph	St. Louis U.	MD 1950	102-110 2nd Ave. S.W., Rochester, Minn.
HEDGES, Jr., Charles Calhoun	U. of California	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
HENDRICK, Robert Smith	Tulane U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
HICKNER, Lawrence Paul	Creighton U.	MD 1947	State Hospital, Rochester, Minn.
JORDAN, Stanley Youngs	Washington U., Mo.	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
KLICKA, Karl Sigmund	Western Reserve U.	MD 1937	St. Barnabas Hosp., Minneapolis, Minn.
LINDBERG, Charles Olov	U. of Oklahoma	MD 1924	Grantsburg, Wis.
LONG, Fred Mac	U. of Oklahoma	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
MOYER, Leonard Byron	U. of Nebraska	MD 1931	Belgrade, Minn.
PURNELL, Don C.	Indiana U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
RUSKIN, David Samuel	U. of Michigan	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
SCIMECA, William Benvenuto	U. of Kansas	MD 1944	102-110 2nd Ave. S.W., Rochester, Minn.
STORSTEEN, Oliver Matthew	U. of Nebraska	MD 1947	102-110 2nd Ave. S.W., Rochester, Minn.
van VEEN, Francis L.	U. of Oregon	MD 1946	15 Broadway, Sauk Rapids, Minn.
WHISNANT, Jack Page	U. of Arkansas	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.

National Board Candidates

Name	School		Address
BRACKETT, Ralph DeRochemont	Harvard U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
BUMPUS, Frank Thatcher	Tufts Med. Col.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
CALLAHAN, John Anthony	Boston U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
CHRISTIANSON, Bruce Wilton	U. of Minnesota	MB 1951	102-110 2nd Ave. S.W., Rochester, Minn.
		MD 1952	
DELANEY, Jr., Leo Thomas	Georgetown U.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
EICHMAN, Peter Liebert	Jefferson Med. Col.	MD 1949	102-110 2nd Ave. S.W., Rochester, Minn.
EVANS, Jr., Eugene Goldsmith	Duke University	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
FIELDMAN, Efreim Jay	State U. of New York	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
FLETCHER, Grant	Stanford U.	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
FOWLER, Ward Scott	Harvard U.	MD 1941	102-110 2nd Ave. S.W., Rochester, Minn.
IVY, Horace Kohman	Northwestern U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
JOHNSON, Jr., Henry A.	Col. of Phys. & Surg.		102-110 2nd Ave. S.W., Rochester, Minn.
	Columbia U.	MD 1950	
LUDWIG, Clarence John	Creighton U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.
MAXFIELD, Robert Guion	New York Med. Col.	MD 1946	102-110 2nd Ave. S.W., Rochester, Minn.
MINTZ, Charles Max	Hahnemann Med. Col.	MD 1947	2215 Plymouth Ave. N., Mpls., Minn.
SIMON, Howard Broida	Yale University	MD 1948	102-110 2nd Ave. S.W., Rochester, Minn.
STARR, Grier Forsythe	Northwestern U.	MD 1951	102-110 2nd Ave. S.W., Rochester, Minn.

Minnesota State Medical Association

Roster for 1953

Officers

O. J. CAMPBELL, M.D.	President	Minneapolis
JUSTUS OHAGE, M.D.	First Vice President	Saint Paul
C. E. MERKERT, M.D.	Second Vice President	Minneapolis
B. B. SOUSTER, M.D.	Secretary	Saint Paul
W. H. CONDIT, M.D.	Treasurer	Minneapolis
C. G. SHEPPARD, M.D.	Speaker, House of Delegates	Hutchinson
H. M. CARRVER, M.D.	Vice Speaker	Rochester
R. R. ROSELL	Executive Secretary	Saint Paul

Councilors

(Terms expire December 31 of year indicated)

First District

JOHN M. WAUGH, M.D. (1953).....Rochester

Second District

R. C. HUNT, SR., M.D. (1953).....Fairmont

Third District

L. G. SMITH, M.D. (1955).....Montevideo

Fourth District

H. J. NILSON, M.D. (1954).....North Mankato

Ninth District

A. O. SWENSON, M.D. (1953), Chairman.....Duluth

Fifth District

L. R. CRITCHFIELD, M.D. (1955).....Saint Paul

Sixth District

H. B. SWEETSER, M.D. (1954).....Minneapolis

Seventh District

W. W. WILL, M.D. (1955).....Bertha

Eighth District

C. L. OPPEGAARD, M.D. (1954).....Crookston

House of Delegates, American Medical Association

(Terms expire December 31 of year indicated)

Members

J. ARNOLD BARGEN, M.D. (1954).....Rochester

O. J. CAMPBELL, M.D. (1953).....Minneapolis

GEORGE EARL, M.D. (1953).....Saint Paul

*F. J. ELIAS, M.D.Duluth

Alternates

PAUL C. LECK, M.D. (1954).....Austin

W. W. WILL, M.D. (1953).....Bertha

E. M. HAMMES, SR., M.D. (1953).....Saint Paul

*J. F. DuBOIS, M.D.Saint Paul

(*Terms expired December 31, 1952)

Scientific Committees

COMMITTEE ON SCIENTIFIC ASSEMBLY

O. J. CAMPBELL, M.D., General Chairman.....Duluth

ROGER L. J. KENNEDY, M.D.Rochester

R. R. ROSELL.....Saint Paul

Section on Medicine

P. G. BOMAN, M.D., Chairman.....Duluth

R. L. PAGE, M.D., Secretary.....St. Charles

Section on Specialties

F. L. SCHADE, M.D., Chairman.....Worthington

C. A. GOOD, JR., M.D., Secretary.....Rochester

Section on Surgery

L. C. CULLIGAN, M.D., Chairman.....Minneapolis

C. E. REA, M.D., Secretary.....Saint Paul

Local Arrangements

VERNON D. E. SMITH, M.D., Chairman.....Saint Paul

MAY, 1953

ANESTHESIOLOGY

R. C. ADAMS, M.D.Rochester

J. W. BAIRD, M.D.Minneapolis

J. H. CROWLEY, M.D.Saint Paul

R. T. KNIGHT, M.D.Minneapolis

R. C. KNUTSON, M.D.Saint Paul

K. E. LATTERELL, M.D.Duluth

T. H. SELDON, M.D.Rochester

BLOOD AND BLOOD BANKS

J. S. LUNDY, M.D.Rochester

PAUL F. DWAN, M.D.Minneapolis

J. W. EDWARDS, M.D.Saint Paul

E. V. GOLTZ, M.D.Saint Paul

WM. V. KNOLL, M.D.Duluth

R. W. KOUCKY, M.D.Minneapolis

N. C. PLIMPTON, JR., M.D.Minneapolis

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MINNESOTA STATE MEDICAL ASSOCIATION

BRUCELLOSIS

W. W. SPINK, M.D.	Minneapolis
JAMES J. COLL, M.D.	Duluth
DEAN S. FLEMING, M.D.	Hopkins
W. A. MERRITT, M.D.	Rochester
R. A. NELSON, M.D.	Fergus Falls

CANCER

(Three-year appointment)

A. H. WELLS, M.D. (1953)	Duluth
DAVID P. ANDERSON, JR., M.D. (1955)	Austin
HERBERT BOYSEN, M.D. (1955)	Madelia
DEAN S. FLEMING, M.D. (1953)	Hopkins
MERRIAM G. FREDRICKS, M.D. (1953)	Duluth
E. C. HARTLEY, M.D. (1955)	Saint Paul
N. K. JENSEN, M.D. (1954)	Minneapolis
JAMES A. JOHNSON, M.D. (1954)	Minneapolis
N. LOGAN LEVEN, M.D. (1954)	Saint Paul
T. B. MAGATH, M.D. (1953)	Rochester
R. A. ROSSBERG, M.D. (1954)	Morris
C. G. UNHLY, M.D. (1954)	Crookston

CHILD HEALTH

G. B. LOGAN, M.D.	Rochester
S. L. AREY, M.D.	Minneapolis
T. C. CHISHOLM, M.D.	Minneapolis
F. G. HEDENSTROM, M.D.	Saint Paul
O. H. JONES, M.D.	Mankato
R. E. NUTTING, M.D.	Duluth
W. B. RICHARDS, M.D.	Saint Cloud
L. F. RICHDORF, M.D.	Minneapolis
A. B. ROSENFELD, M.D.	Minneapolis
V. O. WILSON, M.D.	Rochester

CHRONIC ILLNESS

E. L. TUOHY, M.D.	Duluth
C. A. ANDERSON, M.D.	Hector
F. W. CONLEY, M.D.	Duluth
A. J. GREENBERG, M.D.	Minneapolis
JOHN A. LEPAK, M.D.	Saint Paul
C. W. LEVERENZ, M.D.	Saint Paul
DANIEL F. MCCANN, M.D.	Bemidji
ARTHUR NEUMAIER, M.D.	Glencoe
J. F. NORMAN, M.D.	Crookston
W. A. PIPER, M.D.	Mountain Lake

DIABETES

J. R. MEADE, M.D.	Saint Paul
MOSES BARRON, M.D.	Minneapolis
J. J. COLL, M.D.	Duluth
J. A. LEPAK, M.D.	Saint Paul
J. K. MOEN, JR., M.D.	Minneapolis
W. S. NEFF, M.D.	Virginia
B. F. PEARSON, M.D.	Shakopee
E. H. RYNEARSON, M.D.	Rochester
R. V. SHERMAN, M.D.	Red Wing
C. W. VANDERSLUIS, M.D.	Bemidji

FIRST AID AND RED CROSS

J. S. LUNDY, M.D.	Rochester
E. R. ANDERSON, M.D.	Minneapolis
G. I. BADEAUX, M.D.	Brainerd
J. W. EDWARDS, M.D.	Saint Paul
E. M. ELSEY, M.D.	Glenwood
B. A. FLESCH, M.D.	Lake City
G. H. GOEHRS, M.D.	Saint Cloud
E. V. GOLTZ, M.D.	Saint Paul
WIM V. KNOLL, M.D.	Duluth
R. W. KOUCKY, M.D.	Minneapolis
N. C. PLIMPTON, JR., M.D.	Minneapolis
R. S. YLIVISAKER, M.D.	Minneapolis

FRACTURES

E. T. EVANS, M.D.	Minneapolis
N. H. BAKER, M.D.	Fergus Falls
W. H. COLE, M.D.	Saint Paul
B. C. FORD, M.D.	Marshall
R. K. GHORMLEY, M.D.	Rochester
V. P. HAUSER, M.D.	Saint Paul
W. J. McDONALD, M.D.	Crookston
J. H. MOE, M.D.	Minneapolis
M. J. NYDAHL, M.D.	Minneapolis
J. F. SCHAEFER, M.D.	Owatonna
W. A. SWEDBERG, M.D.	Duluth
J. A. THABES, JR., M.D.	Brainerd

GENERAL PRACTICE

R. H. CREIGHTON, M.D.	Minneapolis
E. C. BAYLEY, M.D.	Lake City
JAMES A. BLAKE, M.D.	Hopkins
R. M. BURNS, M.D.	Saint Paul
DONALD C. DETERS, M.D.	Saint Paul
C. S. DONALDSON, M.D.	Foley

R. J. ECKMAN, M.D.	Duluth
W. E. HART, M.D.	Monticello
ROGER G. HASSETT, M.D.	Mankato
W. W. RIEKE, M.D.	Wayzata
C. H. SHERMAN, M.D.	Bayport

HEARING, CONSERVATION OF

L. R. BOIES, M.D.	Minneapolis
JOHN H. CAMERON, M.D.	Crookston
C. E. CONNOR, M.D.	Saint Paul
J. E. GAIDA, M.D.	Saint Cloud
ANDERSON HILDING, M.D.	Duluth
CONRAD J. HOLMBERG, M.D.	Minneapolis
K. M. SIMONTON, M.D.	Rochester
J. DONALD SJOJING, M.D.	Mankato

HEART

(Three-year appointment)

F. J. HIRSCHDOECK, M.D. (1954)	Duluth
J. F. BORG, M.D. (1954)	Saint Paul
J. F. BRIGGS, M.D. (1953)	Saint Paul
HENDRIK DEKRUIF, M.D. (1955)	Fergus Falls
PAUL F. DWAN, M.D. (1955)	Minneapolis
C. N. HENSEL, M.D. (1955)	Saint Paul
M. M. HURWITZ, M.D. (1953)	Saint Paul
R. O. SATHER, M.D. (1954)	Crookston
H. L. SMITH, M.D. (1954)	Rochester
D. W. WHEELER, M.D. (1954)	Duluth
ASHER WHITE, M.D. (1955)	Minneapolis

HISTORICAL

ROBERT ROSENTHAL, M.D.	Saint Paul
RICHARD BARDON, M.D.	Duluth
W. F. BRAASCH, M.D.	Rochester
CARL FRITSCH, M.D.	New Ulm
R. C. HUNT, M.D.	Fairmont
A. G. LIEDEFF, M.D.	Mankato
O. F. MELLBY, M.D.	Thief River Falls
THOS. A. PEPPARD, M.D.	Minneapolis
G. E. SHERWOOD, M.D.	Kimball
A. M. WATSON, M.D.	Royalton
W. E. WILSON, M.D.	Northfield

HOSPITALS AND MEDICAL EDUCATION

H. S. DIEHL, M.D.	Minneapolis
T. E. BROADIE, M.D.	Saint Paul
H. R. BUTT, M.D.	Rochester
B. C. FORD, M.D.	Marshall
R. F. HEDIN, M.D.	Red Wing
A. C. KERKHOF, M.D.	Minneapolis
H. A. KORDA, M.D.	Pelican Rapids
ARNOLD LARSON, M.D.	Detroit Lakes
J. P. MEDELMAN, M.D.	Saint Paul
W. H. VALENTINE, M.D.	Tracy
H. J. WALDER, M.D.	Duluth

INDUSTRIAL HEALTH

L. S. ARLING, M.D.	Minneapolis
TRACY E. BARBER, JR., M.D.	Austin
C. C. BELL, M.D.	Saint Paul
E. E. CHRISTENSEN, M.D.	Winona
H. B. CLARK, M.D.	Saint Cloud
CLARENCE JACOBSON, M.D.	Chisholm
T. A. LOWE, M.D.	South Saint Paul
ROBERT F. MCGANDY, M.D.	Minneapolis
O. L. MCHAFFIE, M.D.	Duluth
J. R. MCNUTT, M.D.	Duluth
JOHN F. SHROTS, M.D.	Minneapolis
H. H. YOUNG, M.D.	Rochester
L. W. FOKER, M.D.	Minneapolis

MATERNAL HEALTH

J. J. SWENDSON, M.D.	Saint Paul
P. N. BRAY, M.D.	Duluth
C. J. EHRENBERG, M.D.	Minneapolis
O. B. FESENMAIER, M.D.	New Ulm
G. F. HARTNAGEL, M.D.	Red Wing
E. R. HUDEC, M.D.	Echo
A. B. HUNT, M.D.	Rochester
J. L. MCKELVEY, M.D.	Minneapolis
W. F. MERGIL, M.D.	Crookston
A. B. ROSENFELD, M.D.	Minneapolis
F. L. SCHADE, M.D.	Worthington
F. J. SCHATZ, M.D.	Saint Cloud

MEDICAL TESTIMONY

E. M. HAMMES, SR., M.D.	Saint Paul
B. S. ADAMS, M.D.	Hibbing
MARKHAM B. COVENTRY, M.D.	Rochester
GORDON MACRAE, M.D.	Duluth
S. R. MAXEINER, M.D.	Minneapolis
L. H. RUTLEDGE, M.D.	Detroit Lakes
W. G. WORKMAN, M.D.	Tracy

MINNESOTA STATE MEDICAL ASSOCIATION

MILITARY AFFAIRS

J. H. TILLISCH, M.D.	Rochester
E. G. BENJAMIN, M.D.	Minneapolis
FLOYD M. BURNS, M.D.	Milan
LUTHER F. DAVIS, M.D.	Wadena
K. E. JOHNSON, M.D.	Duluth
DONALD MCCARTHY, M.D.	Saint Paul
FRED H. MAGNEY, M.D.	Duluth
N. C. FLIMPTON, JR., M.D.	Minneapolis
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R. H. KATH.....Arlington
CARL LUNDELL.....Granite Falls
E. R. HUDEC.....Echo

Councilor Districts

First District

J. M. WAUGH, M.D.....Rochester
Counties—Dodge, Fillmore, Freeborn, Goodhue, Hous-
ton, Mower, Olmsted, Rice, Steele, Wabasha, Winona

Second District

R. C. HUNT, SR., M.D.....Fairmont
Counties—Cottonwood, Faribault, Jackson, Martin,
Murray, Nobles, Pipestone, Rock, Watonwan

Third District

L. G. SMITH, M.D.....Montevideo
Counties—Big Stone, Chippewa, Kandiyohi, Lac Qui
Parle, Lincoln, Lyon, Meeker, Pope, Redwood, Renville,
Stevens, Swift, Traverse, Yellow Medicine

Fourth District

H. J. NILSON, M.D.....North Mankato
Counties—Blue Earth, Brown, Carver, Le Sueur, Mc-
Leod, Nicollet, Scott, Sibley, Waseca

Fifth District

L. R. CRITCHFIELD, M.D.....Saint Paul
Counties—Anoka, Chisago, Dakota, Isanti, Kanabec,
Mille Lacs, Pine, Ramsey, Sherburne, Washington

Sixth District

H. B. SWEETSER, JR.....Minneapolis
Counties—Hennepin, Wright

Seventh District

W. W. WILL, M.D.....Bertha
Counties—Aitkin, Beltrami, Benton, Cass, Clearwater,
Crow Wing, Hubbard, Koochiching, Morrison, Stearns,
Todd, Wadena

Eighth District

C. L. OPPEGAARD, M.D.....Crookston
Counties—Becker, Clay, Douglas, Grant, Kittson, Lake
of the Woods, Mahnomen, Marshall, Norman, Otter
Tail, Pennington, Polk, Red Lake, Roseau, Wilkin

Ninth District

A. O. SWENSON, M.D.....Duluth
Counties—Carlton, Cook, Itasca, Lake, St. Louis

Woman's Auxiliary to the Minnesota State Medical Association

Officers

MRS. HENRY W. QUIST, SR.	President	Minneapolis
MRS. P. S. RUDIE	President-Elect	Duluth
MRS. C. L. SHEEDY	Past President	Austin
MRS. C. L. OPPEGAARD	First Vice President	Crookston
MRS. ANDREW CHRISTIANSEN	Second Vice President	Saint Paul
MRS. L. P. HOWELL	Third Vice President	Rochester
MRS. O. J. CAMPBELL	Fourth Vice President	Minneapolis
MRS. DAVID HALPERN	Recording Secretary	Brewster
MRS. L. J. LEONARD	Corresponding Secretary	Minneapolis
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MRS. J. K. BUTLER	Auditor	Cloquet
MRS. HARRY KLEIN	Historian	Duluth
MRS. LEO FINK	Parliamentarian	Minneapolis

Regional Advisors

MRS. VIKTOR WILSON	First District	Rochester
MRS. O. M. HEIBERG	Second District	Worthington
MRS. T. R. FRITSCHÉ	Third District	New Ulm
MRS. JOHN DORDAL	Fourth District	Sacred Heart
MRS. CHARLES W. WAAS	Fifth District	Saint Paul
MRS. RALPH CREIGHTON	Sixth District	Minneapolis
MRS. J. C. BUSCHER	Seventh District	St. Cloud
MRS. C. W. MOBERG	Eighth District	Detroit Lakes
MRS. KARL JOHNSON	Ninth District	Duluth

Chairmen of Committees

STANDING COMMITTEES

<i>Advisory</i> —Mrs. C. L. Sheedy	Austin	<i>Medical and Surgical Relief</i> —Mrs. L. G. Culver	Saint Paul
<i>Allied Medical Careers</i> —Mrs. Stanley Peterson	Austin	<i>Organization</i> —Mrs. P. S. Rudie	Duluth
<i>American Medical Education Foundation Fund</i> — Mrs. J. A. Cosgriff	Olivia	<i>Press and Publicity</i> —Mrs. A. B. Rosenfield	Minneapolis
<i>Archives</i> —Mrs. H. H. Fesler	Saint Paul	<i>Printing</i> —Mrs. R. V. Sherman	Red Wing
<i>Bulletin</i> —Mrs. Wm. Gjerde	Lake City	<i>Program and Health Education</i> —Mrs. M. F. Fellows	Duluth
<i>Cancer</i> —Mrs. P. J. Pankratz	Mountain Lake	<i>Public Relations</i> —Mrs. Robert Estrem	Fergus Falls
<i>Editor (MINNESOTA MEDICINE)</i> —Mrs. H. O. Beek	Saint Paul	<i>Resolutions</i> —Mrs. Reuben F. Erickson	Minneapolis
<i>Finance</i> —Mrs. Harold Benjamin	Minneapolis	<i>Revisions</i> —Mrs. D. V. Boardman	Winona
<i>Legislation</i> —Mrs. W. R. Schmidt	Minneapolis	<i>Today's Health</i> —Mrs. M. I. Hauge	Clarkfield

SPECIAL COMMITTEES

<i>Civilian Defense</i> —Mrs. D. G. Mahle	Plainview	<i>News Letter</i> —Mrs. W. G. Johanson	Saint Paul
<i>Health Days</i> —Mrs. Harold F. Wahlquist	Minneapolis	<i>Roster</i> —Mrs. F. A. Zinter	Minneapolis
<i>In Memoriam</i> —Mrs. J. S. Milton	Minneapolis	<i>School of Instruction</i> —Mrs. Leonard Arling	Minneapolis

County Society Roster

Key to Symbols: *Deceased; †Affiliate, Associate or Life Members; ‡In Service;
§Wife is Member of Woman's Auxiliary.

BLUE EARTH COUNTY MEDICAL SOCIETY

Regular meetings, last Monday of each month. Annual meeting, December
Number of members—48

<i>President</i>		§ Geurs, B. R. Mankato	§ Mickelson, J. C. Mankato
Hammer, Lawrence M. Mankato	§ Haes, J. E. Mankato	† Miller, V. L. Mankato	§ Morgan, H. O. Amboy
<i>Secretary</i>	§ Hammar, L. M. Mankato	§ Penn, G. E. Mankato	§ Roth, F. D. Mankato
Chalgren, William S. Mankato	§ Hankerson, R. G. Minnesota Lake	§ Samuelson, L. G. Mankato	† Schmidt, P. A. Aurora, Ill.
Anderson, J. J. Mankato	† Hassett, R. G. Mankato	§ Schmitz, J. D. Mankato	§ Sjoeding, J. D. Mankato
Anderson, Margaret. Mankato	§ Hoeper, P. G. Mankato	§ Smith, P. M. Lake Crystal	§ Sohrmer, A. E. Mankato
§ Andrews, R. N. Mankato	§ Howard, M. L. Mankato	§ Stillwell, W. C. Mankato	§ Troost, H. B. Mankato
Baird, Raymond L. Lake Crystal	§ Huffington, H. L. Mankato	§ Vezina, J. C. Mapleton	§ Von Drasek, Joseph. Mankato
§ Batdorf, B. N. Good Thunder	† Jones, O. H. Mankato	† Wentworth, A. J. Mankato	§ Williams, H. O. Lake Crystal
Butzer, J. A. Mankato	§ Juliar, R. O. St. Clair		
Chalgren, Wm. S. Mankato	§ Kaufman, W. B. Mankato		
Conley, R. H. Mankato	§ Kearney, R. W. Mankato		
† Dahl, G. A. Mankato	§ Kemp, A. F. Mankato		
Dahlstet, J. P. Mankato	§ Koenigsberger, Chas. Mankato		
Engstrom, Robert. Mankato	§ Langhoff, A. H. Mankato		
Eustermann, J. J. Mankato	† Liedloff, A. G. Mankato		
Franchere, F. Wm. Lake Crystal	§ Lindblom, A. E. No. Mankato		
§ Fugina, G. R. Mankato			

BLUE EARTH VALLEY MEDICAL SOCIETY

Regular meetings, third Thursday of each month
Annual meeting in November
Number of Members—39

<i>President</i>		Gardner, V. H. Fairmont	§ Parsons, R. L. Monterey
Krause, Carl W. Fairmont		Hanson, Lewis. Frost	§ Rollins, T. G. Elmore
<i>Secretary</i>		Heimark, J. J. Fairmont	§ Rowe, W. H. Fairmont
Boysen, Herbert. Madelia		§ Holm, P. F. Sarasota, Fla.	§ Russ, H. H. Blue Earth
Armstrong, R. S. Winnebago		§ Hruza, Wm. J. Madelia	§ Smith, Harry. Lake Crystal
§ Barr, W. H. Wells		Hurt, R. C. Fairmont	§ Smith, D. V. Blue Earth
Bergman, O. B. St. James		† Hunte, A. F. Alhambra, Calif.	§ Snyder, C. D. Kiester
§ Blumberg, H. B. Fairmont		Krause, C. W. Fairmont	§ Thayer, E. A. Fairmont
§ Boysen, Herbert. Madelia		§ Lester, M. J. Jr. Truman	§ Vaughan, V. M. Truman
Bratrude, E. J. St. James		§ Lindahl, M. J. Sherburne	§ Virnig, M. P. Wells
Chambers, W. C. Blue Earth		§ Mattson, A. D. St. James	§ Virnig, R. P. Wells
Cooper, M. D. Winnebago		§ McGroarty, J. J. Easton	§ Wandke, O. E. Fairmont
Coulter, H. E. Madelia		§ Mills, J. L. Winnebago	§ Wilson, C. E. Blue Earth
§ Drexler, G. W. Blue Earth		§ Misbach, Wm. D. Fairmont	§ Zemke, E. E. Fairmont
† Farrish, R. C. Sherburne		§ Ourada, A. L. Ceylon	§ Ziegler, Robert G. Welcome

BROWN COUNTY MEDICAL SOCIETY

Regular meetings, quarterly
Annual meeting, January
Number of Members—32

<i>President</i>		§ Fritsche, Carl J. New Ulm	§ Nuesse, W. G. Springfield
Dubbe, Fred H. New Ulm		§ Fritsche, T. R. New Ulm	§ Penk, E. L. Springfield
<i>Secretary</i>		† Glaeser, John H. Minneapolis	§ Peterson, R. A. Vesta
Fritsche, Carl J. New Ulm		§ Goblirsch, A. P. Sleepy Eye	§ Racer, Harley. Gibbon
§ Black, W. A. New Ulm		Hovde, Rolf. Winthrop	§ Rayner, Ralph. Gibbon
Bregel, Fred L. St. James		§ Inglis, William. Redwood Falls	† Reineke, G. F. New Ulm
Cairns, R. J. Redwood Falls		§ Kaiser, Milton L. New Ulm	§ Saffert, C. A. New Ulm
§ Dubbe, F. H. New Ulm		§ Keithahn, E. E. Sleepy Eye	§ Schroepel, J. E. Winthrop
§ Dysterheft, A. F. Gaylord		§ Kitzberger, Peter. New Ulm	§ Seifert, O. J. New Ulm
§ Fesenmaier, O. B. New Ulm		§ Kruzick, S. J. Sleepy Eye	§ Vogel, H. A. New Ulm
§ Flinn, J. B. Redwood Falls		§ Kusske, A. L. New Ulm	§ Wisness, Osmund A. Comfrey
§ Fritsche, Albert. New Ulm		† Kusske, B. W. St. Louis Park	§ Wohlrahe, E. J. Springfield

CAMP RELEASE DISTRICT MEDICAL SOCIETY

Chippewa, Lac Qui Parle and Yellow Medicine Counties
Regular meetings, second and fourth weeks of April, May and September
Annual meeting, October
Number of Members—32

<i>President</i>		Guilbert, G. D. Waukesha, Wis.	† Lee, Walter N. Claremont, Calif.
Johnson, V. M. Dawson		§ Hartfiel, H. A. Montevideo	§ Lima, L. R., Jr. Montevideo
<i>Secretary</i>		§ Hauge, M. I. Clarkfield	§ Lundell, C. L. Granite Falls
Lima, L. R., Jr. Montevideo		§ Hudce, E. R. Echo	§ Nelson, M. S. Granite Falls
§ Allen, J. H. Montevideo		§ Hudspeth, Wm. T. Madison	§ Odland, Olin. Granite Falls
Anderson, C. A. Madison		§ Huffington, Herb L. Waterville	§ Owens, W. A. Montevideo
† Andrejek, A. R. Minneapolis		§ Johnson, C. M. Dawson	§ Pertl, A. L. Canby
§ Barr, Ronald W. Montevideo		§ Johnson, V. M. Dawson	§ Roust, H. A. Montevideo
§ Roody, G. J., Jr. Dawson		† Jordan, Kathleen. Granite Falls	§ Schmidt, P. G., Jr. Granite Falls
§ Burns, F. M. Milan		§ Jordan, L. S. Granite Falls	§ Smith, L. G. Montevideo
§ Burns, M. A. Milan		§ Kaufman, W. C. Appleton	§ Westby, Magnus. Madison
§ Flom, Robert S. Echo		§ Krystosek, L. A. Clara City	§ Westby, N. M. Madison

COUNTY SOCIETY ROSTER

CLAY-BECKER COUNTY MEDICAL SOCIETY

Regular meeting, none
Annual meeting, December
Number of Members—29

President
Midthune, A. S. Lake Park
Secretary
Dodds, William C. Detroit Lakes
† Aborn, W. H. Hawley
Anderson, Roger L. Detroit Lakes
Bigler, Ivane. Perham
Bottolfson, B. T. Moorhead
Brabec, P. F. Bagley
Carlson, Vernon J. Moorhead
Christoferson, Lee. Fargo, N. D.

§ Dodds, Wm. C. Detroit Lakes
§ Duncan, J. W. Moorhead
§ Geib, Martin J. Moorhead
† Hagen, O. J. Moorhead
Humphrey, E. W. Moorhead
Humphrey, E. W., Jr. Moorhead
Ingebritson, E. K. Moorhead
Johnson, Olga H. Moorhead
§ Larson, Arnold. Detroit Lakes
§ Lorentzen, E. S. Detroit Lakes
§ Midthune, A. S. Lake Park

§ Moberg, C. W. Detroit Lakes
Olland, M. E. Detroit Lakes
Oliver, James. Moorhead
Otto, H. C. Frazee
Rice, H. G. Moorhead
Rutledge, L. H. Detroit Lakes
Saxman, Gertrude Olsen. Georgetown
Seitz, S. B. Barnesville
§ Simson, Carl Barnesville
† Thysell, F. A. Moorhead
Thysell, V. D. Hawley

EAST CENTRAL MINNESOTA MEDICAL SOCIETY

Anoka, Chisago, Isanti, Kanabec, Mille Lacs, Pine and Sherburne Counties
Regular meetings, first Tuesday of February, April, June, August, October and December
Annual meeting, first Tuesday in December
Number of Members—40

President
McManus, W. F. Princeton
Secretary
Tesch, Gordon H. Elk River
Adkins, Galen H. Sandstone
Albrecht, H. H. Chisago City
Baars, C. W. Camp Cook, Calif.
Berge, H. L. Mora
Beyer, Eugene. Braham
Blomberg, W. R. Princeton
Bossert, C. S. Mora
§ Bunker, B. W. Anoka
Burseth, E. C. Mora
* Clothier, E. F. Elk River
* Dedolph, T. H. Braham

† Dredge, H. P. Sandstone
§ Gully, R. J. Cambridge
Halpin, J. E. Rush City
Henry, H. W. Hinckley
Holmes, A. E. Rush City
Hubin, E. G. Sandstone
Johnson, Aldridge. Isle
Kapsner, A. T. Princeton
† Kelsey, C. G. St. Paul
Krieser, A. E. Anoka
Larson, G. E. Cambridge
† Lorton, W. L. Junction City, Kans.
Mach, R. F. Pine City
Magnuson, R. C. Cambridge
March, Kenneth A. Cambridge
§ McManus, W. F. Princeton

† Metcalf, N. B. Princeton
§ Miller, E. W. Anoka
§ Nordman, W. F. Mora
Nygren, W. T. Braham
Potek, David. Minneapolis
Roehke, A. B. Elk River
Sanderson, David J. Fergus Falls
Schlesselman, G. H. Minneapolis
Schut, John W. Anoka
§ Spurzem, R. J. Anoka
§ Stahn, Louis H. Anoka
Stratte, A. K. Pine City
Swensen, R. G. North Branch
Tesch, G. H. Elk River
Vik, Melvin. Anoka
† Waller, J. D. Pine City

FREEBORN COUNTY MEDICAL SOCIETY

Regular meetings, every two months, third Thursday
Annual meeting, December
Number of Members—31

President
Nelson, C. E. J. Albert Lea
Secretary
Steiner, L. E. Albert Lea
§ Barr, L. C. Albert Lea
Burns, Catherine. Albert Lea
§ Butturf, C. R. Freeborn
† Calhoun, F. W. Albert Lea
§ Demo, R. A. Albert Lea
§ Donovan, D. L. Albert Lea
§ Egge, S. G. Albert Lea

§ Ellertson, L. M. Albert Lea
Erdal, O. A. Albert Lea
Folken, F. G. Albert Lea
† Freeman, J. P. Glenville
Freiligh, W. P. Albert Lea
† Gullixson, A. Longmont, Colo.
§ Hansen, T. M. Albert Lea
Kaasa, L. J. St. Peter
Kamp, B. A. Albert Lea
† Keil, M. A. Albert Lea
† Leopard, B. A. Brownsville, Tex.
Miller, Samuel Albert Lea

Neel, Harry B. Albert Lea
Nelson, C. E. Albert Lea
Nesheim, M. O. Emmons
Palmer, C. F. Albert Lea
Palmerston, E. S. Minneapolis
Person, J. P. Albert Lea
Prins, L. R. Albert Lea
Schmidt, R. F. Alden
Schultz, J. A. Albert Lea
Sherman, A. G. Albert Lea
Steiner, L. E. Albert Lea
Whitson, S. A. Albert Lea

GOODHUE COUNTY MEDICAL SOCIETY

Regular meeting date, none
Annual meeting, December
Number of Members—29

President
Halvorson, J. W. Goodhue
Secretary
Hartnagel, G. F. Red Wing
Aanes, A. M. Red Wing
§ Akins, W. M. Red Wing
§ Bagby, G. W. Ft. Leonard Wood, Mo.
† Boswell, J. T. Portsmouth, Va.
Bridge, E. V. Cannon Falls
§ Brusegard, J. F. Red Wing
Claydon, H. F. Red Wing

† Dovenmuehle, R. H. El Paso, Tex.
Flom, M. G. Zumbrota
Graves, R. B. Red Wing
Halvorson, J. W. Goodhue
Hartnagel, G. F. Red Wing
Hawley, G. M. B., II. Red Wing
Hedin, R. F. Red Wing
Hofmann, G. N. Rochester
Jones, A. W. Red Wing
Juers, E. H. Red Wing
Kimmel, G. C. Red Wing

Larson, O. E. H. Zumbrota
Liffrig, W. W. Red Wing
Miller, W. R. Red Wing
Molenaar, Robert E. Cannon Falls
Reitmann, J. H. Anoka
Sherman, R. V. Red Wing
Smith, M. W. Red Wing
Steffens, L. A. Red Wing
Wasmund, C. W. Red Wing
Weiss, Carl A. Hastings
Williams, M. R. Cannon Falls

HENNEPIN COUNTY MEDICAL SOCIETY

Regular meetings, first Monday of each month
Annual meeting, October, first Monday
Number of Members—879

President
Ehrenberg, Claude J. Minneapolis
Secretary
Aling, Charles A. Minneapolis
Executive Secretary
Cook, Thomas P. Minneapolis
Abramson, Milton. Minneapolis
Adkins, C. D. Minneapolis
§ Agustsson, Heidar. Minneapolis

§ Ahern, E. E. Minneapolis
Alexander, H. A. Minneapolis
Aling, Chas. A. Minneapolis
Altnow, Hugo O. Minneapolis
§ Anderson, S. C. Minneapolis
Anderson, A. S. St. Louis Park
* Anderson, D. D. Minneapolis
Anderson, D. M. Minneapolis
† Anderson, E. D. Minneapolis

§ Anderson, E. R. Minneapolis
Anderson, F. J. Ft. Leavenworth, Kans.
Anderson, K. W. Minneapolis
Anderson, U. S. Minneapolis
Anderson, Wm. H. Minneapolis
Anderson, Wm. T. Minneapolis
Andreasen, E. C. St. Paul
§ Andresen, K. D'A. Minneapolis

COUNTY SOCIETY ROSTER

Andrews, R. S.	Minneapolis	Chapman, C. B.	Minneapolis	Foster, O. W.	Minneapolis
Ankner, F. J.	Minneapolis	Chavez, D. A.	Minneapolis	Fowler, L. H.	Minneapolis
Archer, W. E.	Minneapolis	Chesler, M. D.	Minneapolis	Fox, James R.	Minneapolis
Arends, A. L.	Minneapolis	Chesley, A. J.	St. Paul	France, D. B.	Minneapolis
Arey, Stuart L.	Minneapolis	Chisholm, T. C.	Minneapolis	Frear, Rosemary	Minneapolis
Arlander, C. E.	Minneapolis	Christensen, L. E.	Minneapolis	Fredericks, G. M.	Minneapolis
Arling, L. S.	Minneapolis	Christianson, H. W.	Minneapolis	Freeman, D. W.	Minneapolis
Arnold, Anna	Minneapolis	Clarke, E. K.	Minneapolis	French, Lyle A.	Minneapolis
Arvidson, Carl G.	Minneapolis	Clay, L. B.	Minneapolis	Friberg, Jos.	Minneapolis
Aune, Martin	Minneapolis	Cochrane, R. F.	Minneapolis	Fried, Louis A.	Minneapolis
Aurand, Wm. H.	Minneapolis	Coe, John I.	Minneapolis	Friedell, Aaron	Minneapolis
Baggenstoss, O. J.	Minneapolis	Cohen, B. A.	Minneapolis	Friedman, Harry S.	Minneapolis
Baird, J. W.	Minneapolis	Cohen, E. B.	Minneapolis	Friedman, Jack	Minneapolis
Baken, M. P.	Minneapolis	Cohen, M. M.	St. Paul	Friend, Charles A.	Minneapolis
Baker, A. B.	Minneapolis	Cohen, S. S.	Oak Terrace	Frost, J. B.	Minneapolis
Baker, A. T.	Minneapolis	Condit, W. H.	Minneapolis	Frost, R. H.	Oak Terrace
Baker, Loe	Minneapolis	Cooper, J. P.	Excelsior	Frykman, H. M.	Minneapolis
Baker, M. E.	Minneapolis	Cooper, Robert R.	Minneapolis	Fuller, Alice H.	Minneapolis
Balkin, S. G.	Minneapolis	Cornica, A. D.	Minneapolis	Funk, Victor K.	Oak Terrace
Bank, H. E.	Portland, Ore.	Correa, D. H.	Minneapolis	Furman, Lucie Christine	Minneapolis
Barno, Alex.	St. Louis Park	Cowan, D. W.	Minneapolis	Gaard, R. C.	Minneapolis
Barr, M. M.	Minneapolis	Craig, M. Elizabeth	Minneapolis	Gallet, L. E.	Minneapolis
Barr, R. N.	Minneapolis	Cranmer, R. R.	Minneapolis	Galligan, Margaret	Minneapolis
Barron, J. J.	Minneapolis	Cranston, R. W.	Minneapolis	Galloway, J. B.	Minneapolis
Barron, Moses	Minneapolis	Creedy, C. D.	Minneapolis	Gammell, H. H.	Minneapolis
Barron, S. Steven	Minneapolis	Creighton, R. H.	Minneapolis	Garske, G. L.	Minneapolis
Baxter, S. H.	Minneapolis	Culligan, L. C.	Minneapolis	Garten, J. L.	Minneapolis
Beach, Northrop	Minneapolis	Cundy, D. T.	Minneapolis	Gaviser, David	Minneapolis
Beard, A. H.	Deephaven	Cutts, George	Minneapolis	Gibbs, Robert W.	Minneapolis
Becker, A. M.	Minneapolis	Dady, E. E.	Minneapolis	Giebenhain, J. N.	Minneapolis
Bedford, E. W.	Minneapolis	Dahl, E. O.	Minneapolis	Giere, J. C.	Minneapolis
Beirstein, Saml.	Minneapolis	Dahl, J. A.	Minneapolis	Giere, R. W.	Minneapolis
Beiswanger, R. H.	Minneapolis	Dahl, James C.	Minneapolis	Gilbert, M. G.	Minneapolis
Bell, E. T.	Minneapolis	Daniel, D. H.	Minneapolis	Gingold, B. A.	Minneapolis
Bellville, T. P.	Minneapolis	Dargay, C. P.	Minneapolis	Girvin, R. B.	Minneapolis
Belzer, M. S.	Minneapolis	Davis, J. C.	Minneapolis	Goldberg, I. M.	Minneapolis
Benesch, L. A.	Minneapolis	Davis, Wm. L.	Mound	Goldman, T. I.	Minneapolis
Benjamin, A. E.	Minneapolis	Del Plaine, C. W.	Minneapolis	Golnder, M. Z.	Minneapolis
Benjamin, E. G.	Minneapolis	Devereaux, T. I.	Wayzata	Goltz, Robert	Minneapolis
Benjamin, H. G.	Minneapolis	Dickman, Roy W.	Minneapolis	Good, H. D.	Minneapolis
Benson, E. E.	Minneapolis	Diehl, Harold S.	Minneapolis	Gordon, P. E.	Minneapolis
Berger, A. G.	Minneapolis	Diessner, H. D.	Minneapolis	Gordon, S. S.	St. Louis Park
Bergh, G. S.	Minneapolis	Donatelle, E. P.	Minneapolis	Grais, Melvin L.	Minneapolis
Bergh, S. M.	Minneapolis	Dorge, R. L.	Minneapolis	Grant, Suzanne	Minneapolis
Berkwitz, N. J.	Minneapolis	Dornblaser, H. B.	Minneapolis	Gratzek, P. R. E.	Minneapolis
Berman, Reuben	Minneapolis	Dorsey, George C.	Minneapolis	Gray, Royal C.	Minneapolis
Bernstein, I. C.	Minneapolis	Doxey, G. L.	Minneapolis	Green, R. A.	Rochester
Bessens, A. N., Jr.	Minneapolis	Doyle, L. O.	Minneapolis	Greenberg, A. J.	Minneapolis
Bessens, D. H.	Buffalo Lake	Drake, C. R.	Minneapolis	Greenfield, Irving	Minneapolis
Bessens, W. A.	Minneapolis	Dredge, T. E.	Minneapolis	Greishiemer, Esther M.	Phila., Pa
Beiter, R. N.	Minneapolis	Drill, H. E.	Hopkins	Grimes, Marian	Minneapolis
Bilka, P. J.	Minneapolis	Duff, Edwin R.	Minneapolis	Gronvall, P. R.	Minneapolis
Binder, M. R.	Minneapolis	Dunlap, E. H.	Minneapolis	Grotting, J. K.	Minneapolis
Blake, A. J.	Hopkins	Dupont, J. A.	Excelsior	Gullickson, Glen, Jr.	Minneapolis
Blake, James A.	Hopkins	Duryea, W. M.	Minneapolis	Gunlaugson, F. G.	Minneapolis
Blake, Paul S.	Hopkins	Dutton, C. E.	Minneapolis	Gushurst, E. G.	Minneapolis
Bloedel, T. J. G.	Osseo	Dvorak, B. A.	Minneapolis	Gustason, H. T.	Minneapolis
Bloom, N. B.	Minneapolis	Dwan, Paul H.	Minneapolis	Haber, Helen R.	Minneapolis
Blumenthal, J. S.	Minneapolis	Dworsky, S. D.	Minneapolis	Hagen, Paul S.	St. Paul
Bodelson, A. H.	Pensacola, Fla.	Ehrenberg, C. J.	Minneapolis	Hagen, W. S.	Minneapolis
Boehrer, J. J., Jr.	Minneapolis	Ehrlich, S. P.	Minneapolis	Haggard, G. D.	Minneapolis
Bofenkemp, Benj.	Minneapolis	Eich, M. A.	Minneapolis	Hall, H. B.	Minneapolis
Bohn, D. G.	Minneapolis	Eichhorn, E. P.	Minneapolis	Hall, W. H.	Minneapolis
Boies, L. R.	Minneapolis	Eisenstadt, D. H.	Minneapolis	Halberg, C. A.	Minneapolis
Booth, A. E.	Minneapolis	Eisenstadt, Wm. S.	Minneapolis	Hannah, H. B.	Minneapolis
Borden, C. W.	Minneapolis	Eitel, George D.	Minneapolis	Hansen, C. O.	Minneapolis
Borgeson, E. J.	Minneapolis	Ellison, D. E.	Minneapolis	Hansen, E. W.	Minneapolis
Borman, C. N.	Minneapolis	Ellison, Ellis	Minneapolis	Hansen, O. S.	Minneapolis
Borowicz, L. A.	Minneapolis	Emond, A. J.	Farmington	Hansen, R. M.	Minneapolis
Bowers, G. G.	Minneapolis	Emond, J. S.	Farmington	Hanson, H. J.	Minneapolis
Boynton, Ruth E.	Minneapolis	Engelhart, P. C.	Minneapolis	Hanson, H. V.	Minneapolis
Bratrud, A. F.	Minneapolis	Englund, E. F.	Minneapolis	Hanson, M. B.	Minneapolis
Breitenbacher, R. B.	Minneapolis	Engstrand, O. J.	Minneapolis	Hanson, M. C.	Minneapolis
Brekke, Harvey J.	Minneapolis	Erickson, C. O.	Minneapolis	Hanson, Wm. A. H.	Minneapolis
Brill, Alice K.	Minneapolis	Erickson, L. F.	Minneapolis	Happe, L. J.	Minneapolis
Brooks, Charles N.	Minneapolis	Erickson, Myron E.	Minneapolis	Harris, L. D.	Minneapolis
Brown, E. D.	Paynesville	Erickson, R. F.	Minneapolis	Hartig, Hermina A.	Minneapolis
Brown, Wm. D.	Minneapolis	Ericson, R. F.	Wayzata	Hartman, Evelyn	Minneapolis
Buckstein, H. F.	Minneapolis	Evans, E. T.	Minneapolis	Hass, F. M.	Minneapolis
Buckley, Ken	Minneapolis	Evans, R. D.	Minneapolis	Hastings, Def. R.	Minneapolis
Buirge, R. E.	Minneapolis	Fahr, George E.	Minneapolis	Hastings, D. W.	Minneapolis
Burnham, W. H.	Minneapolis	Fansler, W. A.	Minneapolis	Hauge, Erling T.	Minneapolis
Bushard, W. J.	Minneapolis	Feeney, J. M.	Minneapolis	Haugen, George W.	Pensacola, Fla.
Buzelle, L. K.	Minneapolis	Feigl, D. W.	Wayzata	Haugen, John A.	Minneapolis
Cable, M. L.	Minneapolis	Feinberg, Philo	Minneapolis	Hauser, G. W.	Minneapolis
Cabot, C. M.	Minneapolis	Feinstein, J. Y.	Minneapolis	Havel, Robert J.	Minneapolis
Cabot, V. S.	Minneapolis	Fenger, E. P. J.	Oak Terrace	Haven, Walter K.	Minneapolis
Cady, L. H.	Minneapolis	Fingerman, D. L.	Minneapolis	Hawkinson, R. P.	Minneapolis
Cameron, Isabell L.	Minneapolis	Fink, Leo Wm.	Minneapolis	Hayes, James M.	Minneapolis
Campbell, L. M.	Minneapolis	Fink, Walter H.	Minneapolis	Hays, Albert T.	Minneapolis
Campbell, O. J.	Minneapolis	Fisher, Isadore I.	Minneapolis	Head, Douglas P.	Minneapolis
Caplan, Leslie	Minneapolis	Fitzgerald, D. F.	Wayzata	Heibel, Robert	Minneapolis
Card, Wm. H.	Great Lakes, Ill.	Fieldstad, C. A.	Minneapolis	Heisler, J. J.	Minneapolis
Carey, J. B.	Minneapolis	Flagg, G. B.	Minneapolis	Hendrickson, J. F.	Minneapolis
Carlander, L. W., Jr.	Minneapolis	Fleeson, Wm. H.	Minneapolis	Henrikson, E. C.	Minneapolis
Carlson, Lawrence	Minneapolis	Fleming, A. S.	Clearwater, Fla.	Henry, C. E.	Kirkville, Mo.
Carlson, L. T.	Minneapolis	Fleming, D. S.	Hopkins	Henry, M. O.	Minneapolis
Caron, R. P.	Minneapolis	Fliher, R. R.	Minneapolis	Herbert, W. L.	Minneapolis
Caspers, Carl G.	Minneapolis	Flink, E. B.	Minneapolis	Hermann, H. W.	Minneapolis
Cavanor, F. T.	Minneapolis	Floersch, A. J.	Seattle, Wash.	Hesdorffer, M. B.	Martin
Ceder, E. T.	Minneapolis	Foker, L. W.	Minneapolis	Higgins, J. H.	Minneapolis
Challman, S. A.	Minneapolis	Folsom, Louis B.	Minneapolis	Hill, Earl	Minneapolis
		Ford, Wm. H.	Minneapolis		

COUNTY SOCIETY ROSTER

Hill, Elmer M. Minneapolis
 †Hillis, S. J. East Braden, Fla.
 Hincley, R. G. Minneapolis
 Hirschfeld, F. R. Minneapolis
 Hitchcock, C. R. Minneapolis
 Hoffbauer, F. W. Minneapolis
 Hoffert, H. E. Minneapolis
 Hoffman, R. A. Minneapolis
 Hoffman, W. L. Minneapolis
 Holmberg, C. J. Minneapolis
 Holzapfel, F. C. Minneapolis
 Horns, H. L. Minneapolis
 Horns, R. C. Minneapolis
 †Houkon, Bjarne
 Luskoto, T.T.E. Africa
 †Houle, R. J. New Brighton
 Hovland, M. L. Minneapolis
 Howard, R. B. Minneapolis
 Howard, E. E. Minneapolis
 Howell, S. W. Minneapolis
 Huenekens, E. J. Minneapolis
 †Hultkrans, J. C. Minneapolis
 Hultkrans, R. E. Minneapolis
 Hurd, Annah Minneapolis
 †Hutchinson, C. J. So. Boston, Mass.
 Hymes, Charles Minneapolis
 †Hynes, John E. Minneapolis
 Ide, Arthur W., Jr. Minneapolis
 Idstrom, L. G. Minneapolis
 Ingalls, Edgar G., Jr. Minneapolis
 Irvine, H. G. Minneapolis
 Iverson, R. M. Minneapolis
 Jacobson, W. E. St. Louis Park
 Jay, A. R. Minneapolis
 Jensen, H. C. Minneapolis
 †Jensen, M. J. Minneapolis
 Jensen, N. K. Minneapolis
 Jensen, R. A. Minneapolis
 †Jenson, A. R. New York
 Jerome, Bourne Minneapolis
 Jerome, Elizabeth Minneapolis
 Jeub, R. P. Minneapolis
 †Johnson, A. B. Minneapolis
 Johnson, A. E. Minneapolis
 Johnson, E. W. Minneapolis
 Johnson, H. A. Minneapolis
 Johnson, J. A. Minneapolis
 Johnson, J. W. Minneapolis
 Johnson, Julius Minneapolis
 †Johnson, M. R. Minneapolis
 Johnson, N. P. Minneapolis
 Johnson, N. T. Minneapolis
 Johnson, Reinald G. Minneapolis
 Johnson, Reuben A. Minneapolis
 Johnson, Robert E. Minneapolis
 Johnson, Roger S. Wayzata
 Johnson, Y. T. Minneapolis
 Jones, D. G. Hopkins
 †Jones, H. W., Jr. Minneapolis
 Jones, Richard Minneapolis
 Jones, W. R. Minneapolis
 Josephich, Alexander Minneapolis
 Judd, W. H. Washington, D. C.
 Juhl, John H. Minneapolis
 Jurdy, M. I. Minneapolis
 Kalin, O. T. Minneapolis
 Kallestad, Leonard L. Wayzata
 Kantar, B. L. Minneapolis
 Kaplan, H. A. Minneapolis
 Kaplan, J. J. Minneapolis
 Karleen, C. I. Minneapolis
 Kaufman, H. J. Minneapolis
 Kelby, G. M. Minneapolis
 Kelly, J. P. Minneapolis
 Kennedy, C. C. Minneapolis
 Kennedy, Jane F. Minneapolis
 Kerkhof, A. C. Minneapolis
 Kessler, Frank, Jr. Minneapolis
 †King, E. A. Minneapolis
 King, F. W. Oak Terrace
 Kinsella, T. J. Minneapolis
 Kistler, A. J. Minneapolis
 Knapp, M. E. Minneapolis
 Knight, R. T. Minneapolis
 †Knight, Ray R. Minneapolis
 Knudsen, Helen L. Minneapolis
 Koeneke, G. M. Minneapolis
 Koller, H. M. Minneapolis
 Koller, L. R. Minneapolis
 Koller, Robert Minneapolis
 Korchik, J. P. Minneapolis
 Kottke, F. J. Minneapolis
 Koucey, R. W. Minneapolis
 Kremen, A. J. Minneapolis
 Kucera, F. J. Hopkins
 Kucera, W. J., Jr. Minneapolis
 LaBree, John St. Louis Park
 †LaGaard, S. M. Minneapolis
 Lajoie, J. M. Minneapolis
 Lamb, H. Douglas Minneapolis
 Lang, L. A. Minneapolis
 Lapiere, A. P. Minneapolis
 Lapiere, J. T. Minneapolis

Larsen, F. W. Minneapolis
 †Larson, C. M. Minneapolis
 †Larson, L. M. Minneapolis
 †Larson, Leonard M. Oak Terrace
 †Larson, P. N. Minneapolis
 †Larson, R. H. Anoka
 †LaVake, R. I. Minneapolis
 Laymon, C. W. Minneapolis
 †Lazar, H. L. Excelsior
 †Leavitt, H. H. Phoenix, Ariz.
 Lebowske, J. A. Minneapolis
 †Lecklitner, M. D. Minneapolis
 Leemhuis, A. J. Minneapolis
 Leland, H. R. Minneapolis
 Lengby, F. A. Minneapolis
 †Lenz, Otto A. Minneapolis
 †Leonard, L. J. Minneapolis
 †Leonard, Saml. Minneapolis
 Lerner, A. R. Minneapolis
 Lewis, F. J. Minneapolis
 Lillehei, E. J. Robbinsdale
 †Lind, C. J., Jr. Ft. Sam Houston, Tex.
 †Lindberg, A. C. Minneapolis
 †Lindberg, V. L. Minneapolis
 †Lindgren, W. R. Minneapolis
 †Lindgren, R. C. Minneapolis
 †Lindquist, R. H. Minneapolis
 Linner, Gunnar Minneapolis
 Linner, Henry P. Minneapolis
 †Linner, John H. Minneapolis
 Linner, Paul W. Minneapolis
 Lippman, E. S. Minneapolis
 †Lipschultz, Oscar Minneapolis
 Litchfield, John T. Minneapolis
 Litman, A. B. Minneapolis
 †Lober, Paul H. Minneapolis
 †Lofness, S. V. Oak Terrace
 †Lofseil, R. C. Minneapolis
 Loomis, E. A. Minneapolis
 †Lott, F. H. Minneapolis
 Lovett, Beatrice R. Oak Terrace
 Lowry, Elizabeth C. Minneapolis
 Lowry, Paul Minneapolis
 Lowry, Thomas Minneapolis
 †Lueck, W. W. Minneapolis
 †Lufkin, N. H. Minneapolis
 †Lund, George Minneapolis
 †Lundberg, Ruth I. Minneapolis
 †Lundblad, R. A. Minneapolis
 †Lundblad, S. W. Minneapolis
 †Lundgren, A. C. Minneapolis
 †Lundquist, V. J. P. Minneapolis
 †Lynch, M. J. Minneapolis
 †Lysne, Henry Minneapolis
 †Lysne, Myron Minneapolis
 †MacCarthy, J. D. Minneapolis
 †MacDonald, D. A. Minneapolis
 †MacDonald, John W. Minneapolis
 †Mach, Frank B. Minneapolis
 †MacKinnon, D. C. Minneapolis
 †Macnic, John S. Minneapolis
 †Maeder, E. G. Minneapolis
 †Maland, C. O. Minneapolis
 †Maloney, Wm. F. Minneapolis
 †Mankey, J. C. Minneapolis
 †Marking, G. H. Minneapolis
 †Martin, Geo. R. Minneapolis
 †Martinson, C. J. Wayzata
 †Martinson, E. J. Wayzata
 †Matchan, G. R. Saint Paul
 †Mattill, P. M. Oak Terrace
 †Matten, H. A. N. Minneapolis
 †Maxeiner, S. R. Minneapolis
 †McCaffrey, F. J. Minneapolis
 †McCann, E. J. Minneapolis
 †McCannel, M. A. Minneapolis
 †McCarthy, Donald Saint Paul
 †McCartney, J. S. Minneapolis
 †McCormick, D. P. Minneapolis
 †McDaniel, Orianna Minneapolis
 †McFarland, H. H. Minneapolis
 †McGandy, R. F. Minneapolis
 †McGeary, G. E. Minneapolis
 †McGerny, M. W. Minneapolis
 †McKelvey, J. L. Minneapolis
 †McKenzie, C. H. Minneapolis
 †McKinley, C. A. Minneapolis
 †McKinney, F. S. Minneapolis
 †McLaughlin, B. H. Saint Paul
 †McMurtrie, Wm. B. Minneapolis
 †McNeil, J. J. Minneapolis
 †McPheeters, H. O. Minneapolis
 †McQuarrie, Irvine Minneapolis
 †Meller, R. L. Minneapolis
 †Merkert, C. E. Minneapolis
 †Merkert, G. L. Minneapolis
 †Merrick, C. T. Minneapolis
 †Merrill, Elizabeth Minneapolis
 †Meyer, A. J. Minneapolis
 †Meyer, Ette L. Minneapolis
 †Meyer, Robert J. Minneapolis
 †Michael, J. C. Minneapolis
 †Michel, H. H. Minneapolis
 †Michelsen, Emma F. Minneapolis

†Michelson, H. E. Minneapolis
 †Miller, A. L. Minneapolis
 †Miller, Harold E. Minneapolis
 †Miller, Hugo E. Minneapolis
 †Miller, J. C. Minneapolis
 †Millett, D. K. Minneapolis
 †Milton, J. S. Minneapolis
 †Minsky, A. A. Minneapolis
 †Mitby, Irving Minneapolis
 †Mitchell, B. D. Minneapolis
 †Mitchell, E. C. Minneapolis
 †Mitchell, M. T. Minneapolis
 †Mixer, Harry W. Minneapolis
 †Moe, John H. Minneapolis
 †Moehn, John T. Minneapolis
 †Moen, J. K., Jr. Minneapolis
 †Monahan, Elizabeth S. Minneapolis
 †Monson, E. M. Minneapolis
 †Moore, George E. Buffalo, N. Y.
 †Moore, I. H. Minneapolis
 †Moorhead, Marie Minneapolis
 †Moos, Daniel J. Minneapolis
 †Mork, A. H. Anoka
 †Mork, Frank E. Anoka
 †Morrison, C. J. Minneapolis
 †Mosser, Donn G. Minneapolis
 †Mulholland, Wm. M. Minneapolis
 †Murphy, E. P. Minneapolis
 †Musty, N. J. Minneapolis
 †Myers, J. A. Minneapolis
 †Myhre, James A. Minneapolis
 †Naslund, A. W. Minneapolis
 †Nauth, Bernard S. Saint Paul
 †Neal, Joe M. Minneapolis
 †Neary, R. P. Minneapolis
 †Nelson, Bernette G. Minneapolis
 †Nelson, Bernice A. Minneapolis
 †Nelson, C. B. Minneapolis
 †Nelson, E. N. Minneapolis
 †Nelson, Harvey Minneapolis
 †Nelson, L. S. Minneapolis
 †Nelson, M. C. Minneapolis
 †Nelson, Maxine Minneapolis
 †Nelson, O. L. N. Minneapolis
 †Nelson, W. I. Minneapolis
 †Nerenberg, S. T. Minneapolis
 †Nesbitt, Saml. Minneapolis
 †Nesset, L. B. Minneapolis
 †Nesset, Wm. D. Minneapolis
 †Neumeister, Charles Minneapolis
 †Nice, C. M. Minneapolis
 †Noonan, Wm. J. Minneapolis
 †Noran, A. S. N. Minneapolis
 †Noran, H. H. Minneapolis
 †Nord, R. E. Minneapolis
 †Nordin, G. T. Minneapolis
 †Nordland, Martin Minneapolis
 †Nordland, Martin, Jr. Minneapolis
 †Norum, Henry A. Minneapolis
 †Norval, Mildred Minneapolis
 †Noth, H. W. Minneapolis
 †Nydyal, M. J. Minneapolis
 †Nylander, E. G. Minneapolis
 ††Nystrom, Ruth G. Malibu Beach, Calif.
 †O'Donnell, J. E. Minneapolis
 †O'Hanlon, J. A. Minneapolis
 †Oberg, Carl M. Minneapolis
 †Olsen, Edw. G. Minneapolis
 †Olson, Alton C. Minneapolis
 †Olson, Carl K. Minneapolis
 †Olson, C. K. Minneapolis
 †Olson, Olof A. Minneapolis
 †O'Phelan, E. Harvey Minneapolis
 †Oppen, E. G. Minneapolis
 †Oppen, Melvin G. Wayzata
 †Opstad, E. T. Oak Terrace
 †Palen, B. J. Minneapolis
 †Papermaster, T. C. Minneapolis
 †PeLuso, Charles R. Minneapolis
 †Peppard, Thos. A. Minneapolis
 †Perlman, H. L. Minneapolis
 †Petersen, G. L. Minneapolis
 †Petersen, John R. Minneapolis
 †Petersen, P. C. Minneapolis
 †Petersen, Wm. E. Minneapolis
 †Peterson, H. W. Minneapolis
 †Peterson, N. P. Minneapolis
 †Peterson, O. H. Minneapolis
 ††Peterson, O. H., Jr. Minneapolis
 †Peterson, Palmer A. Minneapolis
 †Peterson, P. E. Minneapolis
 †Peterson, W. C. Minneapolis
 †Peterson, W. Henry Minneapolis
 †Petit, J. V. Minneapolis
 †Petit, Leon J. Minneapolis
 †Pewters, J. T. Minneapolis
 †Peyton, Wm. T. Minneapolis
 †Phelps, K. A. Minneapolis
 †Plass, H. F. S. Minneapolis
 ††Platou, E. R. Minneapolis
 †Plimpton, N. C., Jr. Minneapolis
 †Pohl, John F. M. Minneapolis
 †Polzak, J. A. Minneapolis

COUNTY SOCIETY ROSTER

Poppe, F. H. Minneapolis
Potter, R. B. Minneapolis
Pratt, F. J. Minneapolis
Pratt, F. J., Jr. Minneapolis
Preine, Irving A. Minneapolis
Preston, Paul James Minneapolis
Priest, Robt. E. Minneapolis
Prim, Jos. A. Minneapolis
Proffitt, Wm. E. Minneapolis
Proshek, C. E. Minneapolis
Quello, R. O. B. Minneapolis
Quist, Henry W. Minneapolis
Quist, H. W., Jr. Minneapolis
Ransom, H. R. Osseo
Reader, D. R. Minneapolis
Regnier, Edw. A. Minneapolis
Reid, Lewis M. Excelsior
Reif, H. A. Minneapolis
Reiley, R. E. Minneapolis
Remote, W. D. Minneapolis
Resch, J. A. Minneapolis
Rice, Carl O. Minneapolis
Rice, Frank B. Minneapolis
Rice, Fred A. Minneapolis
Richdorf, L. F. Minneapolis
Rieke, W. W. Wayzata
Rigler, Leo G. Minneapolis
Riordan, Elsie M. Minneapolis
Risch, R. E. Minneapolis
Rizer, D. K. Minneapolis
Rizer, R. J. Minneapolis
Robb, Edwin F. Minneapolis
Robbins, O. F. Minneapolis
Roberts, L. J. Minneapolis
Roberts, S. W. Minneapolis
Roberts, Wm. B. Minneapolis
Rocknem, R. E. Minneapolis
Rockwell, C. V. Minneapolis
Rodda, Fredk. C. Minneapolis
Rodgers, R. S. Minneapolis
Romness, Kenneth Minneapolis
Rosander, Phyllis Minneapolis
Rosenbaum, D. L. Minneapolis
Rosendahl, F. G. Minneapolis
Rosenfield, A. B. Minneapolis
Rosenow, J. H. Minneapolis
Rosenwald, R. M. Minneapolis
Ross, A. J. Minneapolis
Rossen, Ralph Hastings
Rothnem, Morris Minneapolis
Rucker, Wm. H. Minneapolis
Rud, Norman E. Minneapolis
Ruseth, A. N. Minneapolis
Rusten, E. M. Minneapolis
Rydburg, W. C. Minneapolis
St. Cyr, Harry W., Jr. Robbinsdale
St. Cyr, K. J. Robbinsdale
Sadler, Wm. P., Jr. Minneapolis
Salterman, B. I. Minneapolis
Samuelson, Saml. Minneapolis
Sandt, K. E. Minneapolis
Sanford, R. A. Minneapolis
Sawatzky, Wm. A. Minneapolis
Sborov, A. M. Minneapolis
Schaaf, F. H. K. Minneapolis
Schaar, F. E. Minneapolis
Schaefer, W. G. Minneapolis
Scheldrup, N. H. Minneapolis
Scherer, L. R. Minneapolis
Scherling, S. S. Minneapolis
Schiele, B. C. Minneapolis
Schmidt, G. F. Minneapolis
Schmidt, W. R. Minneapolis
Schmitt, S. C. El Cason, Calif.
Schneider, R. A. New York, N. Y.
Schottler, M. E. Minneapolis
Schroeder, A. J. Minneapolis
Schultz, J. H. Minneapolis
Schultz, P. J. Minneapolis
Schulze, Wm. M. Minneapolis

Schwartz, E. R. Minneapolis
Schwartz, V. J. Minneapolis
Scott, H. G. Minneapolis
Seaberg, John A. Minneapolis
Segal, M. A. Minneapolis
Seham, Max. Minneapolis
Seifert, M. H. Excelsior
Seljeskog, S. R. Minneapolis
Semsch, R. D. Minneapolis
Shandorf, J. F. Minneapolis
Shaperman, Eva P. Minneapolis
Shapiro, S. K. Minneapolis
Shaw, H. A. Minneapolis
Shea, Andrew W. Minneapolis
Sher, Lewis Minneapolis
Sherman, L. F. Minneapolis
Shronts, J. F. Minneapolis
Siegmann, Wm. C. Minneapolis
Sikkema, Stella Minneapolis
Silver, J. D. Minneapolis
Simons, J. H. Minneapolis
Simonson, D. B. Minneapolis
Simpson, E. DeW. Minneapolis
Sinykin, M. B. Minneapolis
Siperstein, D. M. Minneapolis
Sivertsen, Andrew Minneapolis
Sivertsen, Ivar Minneapolis
Skjold, A. C. Minneapolis
Smiley, J. T. Minneapolis
Smisek, F. M. E. Minneapolis
Smith, Adam M. Minneapolis
Smith, Archie M. Minneapolis
Smith, Baxter A., Jr. Minneapolis
Smith, G. G. Minneapolis
Smith, Homer R. Minneapolis
Smith, Margaret I. Robbinsdale
Smith, Marie A. Minneapolis
Smith, Norvin R. Minneapolis
Smith, Theo. S. Minneapolis
Smith, Wm. T. Minneapolis
Soderling, R. T. Minneapolis
Solhaug, Saml. B. Minneapolis
Solvason, H. M. Minneapolis
Spain, W. Thos. New Brunswick, N. J.
Spano, Jos. P. Minneapolis
Spink, W. W. Minneapolis
Sponsel, Kenath Minneapolis
Spratt, Chas. N. Minneapolis
Stahr, A. C. Hopkins
Stanford, C. E. Minneapolis
Staub, Henry P. Minneapolis
Stelter, L. A. Minneapolis
Stennes, J. L. Minneapolis
Stewart, M. J. Minneapolis
Stewart, Rolla I. Minneapolis
Steigler, F. S. Saint Paul
Stillwell, G. K. Minneapolis
Stoesser, A. V. Minneapolis
Stoltz, Robert G. Minneapolis
Stomel, Joseph. Los Angeles, Calif.
Stone, S. P. Minneapolis
Strachauer, A. C. Minneapolis
Strickler, J. H. Minneapolis
Strom, G. W. Minneapolis
Stromgren, D. T. Minneapolis
Stromme, Wm. B. Minneapolis
Strunk, C. A. Minneapolis
Stuermer, Harry W. Minneapolis
Sturges, Robert L. Minneapolis
Suhby, Walter Minneapolis
Sukov, Marvin Minneapolis
Swanson, R. E. Minneapolis
Sweetser, H. B. Minneapolis
Sweetser, T. H. Minneapolis
Sweitzer, S. E. Minneapolis
Swendseen, C. G. Minneapolis
Syvertson, Jerome T. Minneapolis
Tangen, G. M. Minneapolis
Taylor, Jos. H. Minneapolis
Tenner, R. J. Minneapolis

Terry, Wm. S. Portsmouth, Va.
Thomas, George E. Minneapolis
Thomas, A. Boyd Minneapolis
Thompson, W. H. Minneapolis
Thorsen, David S. Minneapolis
Thorson, S. V. Minneapolis
Thysell, D. M. Minneapolis
Tichey, Fae Y. Minneapolis
Tittingdale, A. C. Minneapolis
Tinkham, R. G. Minneapolis
Tittud, L. A. Minneapolis
Tobin, John D. Minneapolis
Todd, Romona L. Minneapolis
Trach, B. B. Minneapolis
Trow, James E. Minneapolis
Trow, Wm. H. Minneapolis
Trueman, H. S. Minneapolis
Tudor, R. B. Minneapolis
Tunstead, H. J. Minneapolis
Turnaciff, D. D. Saint Paul
Twomey, J. E. Minneapolis
Ude, Walter E. Minneapolis
Ulrich, Henry L. Minneapolis
Ulvestad, H. S. Minneapolis
Undine, C. A. Minneapolis
Vik, A. Elliott. Minneapolis
Wahlquist, H. F. Minneapolis
Waldron, C. W. Minneapolis
Wall, Carl R. Minneapolis
Walsh, Francis M. Minneapolis
Walsh, Wm. T. Minneapolis
Wangenstein, O. H. Minneapolis
Ward, Percy A. Minneapolis
Watson, C. G. Minneapolis
Watson, C. J. Minneapolis
Weaver, M. Mc. Vancouver, B. C.
Webb, Edgar A. Minneapolis
Webb, Roscoe C. Minneapolis
Webber, R. J. Hopkins
Weber, Lowell Minneapolis
Weisberg, R. J. Minneapolis
Welles, H. J. Minneapolis
Wendland, J. P. Minneapolis
Werner, George Minneapolis
West, Catherine C. Minneapolis
Wethall, Anton G. Minneapolis
Wetherby, Macnider Minneapolis
Wheeler, R. W. Minneapolis
White, A. A. Minneapolis
White, S. M. Minneapolis
White, W. D. Minneapolis
Whitesell, L. A. Minneapolis
Widen, W. F. Minneapolis
Wilcox, A. E. Minneapolis
Wildner, K. W. Minneapolis
Wildner, R. L. Minneapolis
Wildner, R. M., Jr. Minneapolis
Wilken, P. A. Minneapolis
Willcutt, C. E. Phoenix, Ariz.
Williams, Robert Carthage, Ill.
Winchell, Paul Minneapolis
Winther, Nora M. C. Minneapolis
Wipperman, F. F. Minneapolis
Witham, Carl A. Minneapolis
Wittich, F. W. Minneapolis
Wohlrahe, A. A. Minneapolis
Wohlrahe, A. C. Minneapolis
Wolf, Alfred H. Minneapolis
Wolter, Frederick H. Minneapolis
Wright, T. D. Minneapolis
Wright, Wale S. Minneapolis
Wright, Wm. S. Minneapolis
Wyatt, O. S. Minneapolis
Wynne, H. M. N. Minneapolis
Ylvisaker, R. S. Minneapolis
Yoerg, Otto W. Minneapolis
Zabrendt, O. Lewis. Minneapolis
Zaworski, Leo A. Minneapolis
Zierold, A. A. Minneapolis
Zinter, F. A. Minneapolis
Ziskin, Thos. Minneapolis

KANDIYOHI-SWIFT-MEEKER COUNTY MEDICAL SOCIETY

Regular meetings, third Thursday of each month

Annual meeting, December
Number of Members—48

President
Peterson, Willard E. Willmar
Secretary
Jacobs, D. L. Willmar
Allison, D. D. Litchfield
Austrian, Sol Cosmos
Bosland, H. G. Willmar
Bradley, N. J. Willmar
Chadbourne, W. A. Minneapolis
Daignault, Oscar Benson
Danielson, K. A. Litchfield
Danielson, Lennox. Litchfield
Dille, D. E. Litchfield

Eberley, T. S. Benson
Ellinger, A. J. Willmar
Fisher, J. M. Willmar
Frederickson, Alice C. Willmar
Frisch, F. P. Willmar
Frost, E. H. Willmar
Giere, S. W. Benson
Gilman, L. C. Willmar
Griffin, R. P. Benson
Guy, Jack A. New London
Herbst, R. F. Willmar
Hinz, W. E. Willmar
Hodapp, R. V. Willmar

Holm, Donald. Benson
Jacobs, D. L. Willmar
Jacobs, J. C. Willmar
Katzberg, Lewis. Willmar
Kaufman, E. J. Appleton
Lundblad, R. M. Clara City
Macklin, W. E., Jr. Willmar
McCarthy, A. M. Willmar
Michels, R. P. Willmar
O'Connor, D. C. Eden Valley
Opsahl, L. J. Willmar
Ostling, B. C. Kerkhoven
Pedersen, Robert L. Willmar

COUNTY SOCIETY ROSTER

† Penhall, F. W. Willmar
 Peterson, W. E. Willmar
 Porter, O. M. Willmar
 Proeschel, R. K. Willmar
 Rorem, Joseph A. Appleton

Rygh, H. N. Atwater
 Schnell, F. S. Litchfield
 Schutz, John C. Eden Valley
 Sellers, G. K. Dassel
 Solsem, F. N. S. Spicer

Sorum, F. T. Willmar
 Sutherland, W. H. Benson
 ‡ Verby, J. E., Jr. Litchfield
 Wilmot, C. A. Litchfield
 Wilmot, H. E. Litchfield

LYON-LINCOLN COUNTY MEDICAL SOCIETY

Regular meeting, last Tuesday of September, October, April and May
 Annual meeting, last Tuesday of October
 Number of Members—28

President
 Remsberg, Robert R. Tracy
Secretary
 Purves, G. H. Hendricks
 ‡ Benson, L. M. Tracy
 Bodaski, Albert A. Tyler
 Eckdale, J. E. Marshall
 Ferguson, W. C. Walnut Grove
 Ford, Burton C. Marshall
 Friedell, George Ivanhoe

† Gray, F. D. Marshall
 Hedenstrom, P. C. Marshall
 Helferty, J. K. Boise, Ida.
 Hermanson, P. D. Hendricks
 † Hoidale, Andrew D. Tracy
 Kreuzer, Titus Marshall
 Johnson, C. Percy Tyler
 Monson, L. J. Canby
 Murphy, J. E. Marshall
 Peterson, K. A. Marshall
 Purves, G. H. Hendricks

Remsberg, R. R. Tracy
 † Robertson, J. B. Minneapolis
 Selher, A. F. Ruliton
 Smith, Lloyd A. Tyler
 Thompson, C. O. Hendricks
 Turbak, C. E. Canby
 ‡ Vadheim, A. L. Tyler
 † Valentine, W. H. Tracy
 Wolstan, S. D. Minnesota
 Workman, W. G. Tracy
 Yaeger, W. W. Marshall

MCLEOD COUNTY MEDICAL SOCIETY

Regular meeting, third Thursday of each month
 Annual meeting, January
 Number of Members—21

President
 Peterson, Kenneth L. Hutchinson
Secretary
 Griebie, Grant L. Brownston
 Brink, D. M. Hutchinson
 † Clement, J. B. Lester Prairie
 ‡ Goss, H. C. Glencoe
 Goss, Martha D. Glencoe

Griebie, Grant L. Brownston
 Holm, H. H. Glencoe
 Jensen, A. M. Brownston
 Klima, W. W. Stewart
 † Leitschuh, L. F. Winsted
 Lippmann, E. W. Hutchinson
 ‡ McMahon, M. J. St. Cloud
 Neumaier, Arthur Glencoe
 Peterson, K. P. Hutchinson

Pone, John Silver Lake
 Sahr, W. G. Hutchinson
 Scholpp, O. W. Hutchinson
 Selmo, J. D. Norwood
 Sheppard, C. G. Hutchinson
 ‡ Smith, G. R. Hutchinson
 Smyth, J. J. Lester Prairie
 Truesdale, C. W. Glencoe

MOWER COUNTY MEDICAL SOCIETY

Regular meeting, last Thursday of each month
 Annual meeting, December
 Number of Members—36

President
 Anderson, H. J. Austin
Secretary
 Rosenthal, F. H. Austin
 ‡ Anderson, D. P. Austin
 ‡ Anderson, H. J. Austin
 ‡ Anderson, Wallace R. Austin
 Barber, Tracy Austin
 Cronwell, B. J. Austin
 ‡ Fisch, H. M. Austin
 ‡ Flanagan, L. G. Austin
 Frydenlund, C. B. Lyle
 ‡ Grise, W. B. Austin

† Havens, J. G. W. Austin
 † Hegge, O. H. Austin
 ‡ Hegge, R. S. Austin
 ‡ Hertel, G. E. Austin
 ‡ Hesla, Imman A. Austin
 ‡ Leck, P. C. Austin
 ‡ Lewis, J. S., Jr. Minneapolis
 ‡ Lommen, P. A. Austin
 ‡ McKenna, Elizabeth M. Austin
 ‡ McKenna, J. K. Austin
 ‡ Melzer, G. R. Lyle
 ‡ Miller, Herman Grand Meadow
 ‡ Morse, M. P. LeRoy
 ‡ Nesse, J. A. Austin

Osborn, Donald O. Austin
 Peterson, Stanley C. Austin
 Robertson, P. A. Austin
 Rosenthal, F. H. Austin
 Sargent, E. C., Jr. Austin
 Schneider, F. J. Austin
 Seery, T. M. Austin
 Sheedy, C. L. Austin
 Thomson, James M. Austin
 Twiggs, L. F. Austin
 Van Cleve, H. P. Austin
 Wilson, F. C. Austin
 Wright, R. R. Austin

NICOLLET-LE SUEUR COUNTY MEDICAL SOCIETY

Regular meeting, not scheduled
 Annual meeting, December
 Number of Members—29

President
 Johnson, H. C. No. Mankato
Secretary
 Nilson, H. J. No. Mankato
 ‡ Aitkens, H. B. LeCenter
 ‡ Branham, D. S. St. Peter
 Canfield, Wayne W. St. Peter
 ‡ Covell, H. W. St. Peter
 ‡ Curtis, R. A. LeCenter
 ‡ Erickson, Swan Le Sueur
 ‡ Giroux, A. A. Mankato

Gridley, John W. St. Peter
 ‡ Grimes, B. P. St. Peter
 ‡ Henry, M. R. St. Peter
 ‡ Johnson, H. C. No. Mankato
 ‡ Kabrick, O. A. St. Peter
 ‡ Kath, R. H. Arlington
 ‡ Larson, M. H. Nicollet
 ‡ Lenander, M. E. St. Peter
 ‡ Nilson, H. J. No. Mankato
 ‡ Olmanson, E. G. St. Peter
 ‡ Olson, D. C. Gaylord
 ‡ Orwoll, H. S. Japan

‡ Rudie, C. N. St. Peter
 ‡ Schulberg, V. A. New Port Beach, Calif.
 ‡ Sjostrom, L. E. St. Peter
 ‡ Sonnecayn, N. N. Le Sueur
 ‡ Stoekmann, Arthur E. St. Peter
 ‡ Strathern, C. S. St. Peter
 ‡ Strathern, F. P. St. Peter
 ‡ Traxler, J. F. Henderson
 ‡ Wilcox, C. C. St. Peter
 ‡ Wohlrahe, C. F. No. Mankato

OLMSTED-HOUSTON-FILLMORE-DODGE COUNTY MEDICAL SOCIETY

Regular meetings, first Wednesday of every other month
 Annual meeting in November
 Number of Members—570

President
 Moersch, F. P. Rochester
Secretary
 Carryer, Haddon M. Rochester

‡ Achor, R. W. P. Rochester
 ‡ Adams, R. C. Rochester
 ‡ Aga, John H. Rochester
 ‡ Affeldt, D. E. Kasson

‡ Ahlfs, J. J. Caledonia
 ‡ Allen, E. V. N. Rochester
 ‡ Allen, Raymond A. Rochester
 ‡ Amberg, Samuel Rochester

COUNTY SOCIETY ROSTER

Andersen, H. A. Rochester
 Anderson, M. J. Rochester
 Anderson, Milton. Rochester
 Ardan, Nicholas, Jr. Rochester
 Armstrong, Wilbur A. Rochester
 ‡Atmore, W. G. Brooklyn
 Baggenstoss, A. H. Rochester
 Bahr, R. C. Rochester
 Bain, R. C. San Francisco, Calif.
 Bair, Hugo L. Rochester
 Baker, G. S. Rochester
 Baker, H. L. Rochester
 Baker, H. R. Hayfield
 Baker, P. L. Rochester
 Baker, R. L. Madison, Wis.
 ‡Balfour, D. C. Rochester
 Balfour, W. M. Rochester
 Banner, E. A. Rochester
 Bannoin, W. G. Rochester
 Barga, J. A. Rochester
 Barker, N. W. Rochester
 Barrett, J. W. Rochester
 Bartholomew, L. G. Rochester
 Baston, J. A. Rochester
 Bayard, E. D. Rochester
 Beahrs, O. H. Rochester
 Beard, E. F. Rochester
 Becker, D. L. Rochester
 Becker, S. W., Jr. Chicago, Ill.
 Bender, L. F. San Diego, Calif.
 Bennett, Warren A. Rochester
 Benoit, Clair F. Rochester
 Berens, James. Rochester
 Berge, Henry B. Rochester
 Berge, Kenneth G. Rochester
 Berkman, David. Oronoco
 Berkman, J. M. Rochester
 Bernatz, P. E. Decorah, Iowa
 Bickel, W. Rochester
 Bigelow, C. E. Dodge Center
 Black, B. M. Rochester
 Block, M. A. Rochester
 †Boothby, W. M., Albuquerque, N. M.
 Bostwick, J. L. Montgomery, Ala.
 †Bowes, Donald E. Rochester
 †Bowes, Earl B. Rochester
 †Boyd, D. A., Jr. Rochester
 Braasch, J. W. Rochester
 Braasch, Wm. F. Rochester
 Brady, Joan. Rochester
 †Brandenburg, Joan. Rochester
 †Brandenburg, R. O. Rochester
 Braun, Robert A. Rochester
 Brickley, P. M. Rochester
 Brindley, C. O. Rochester
 Broadbent, J. C. Rochester
 Broders, C. W. Rochester
 Brown, Alexander. Rochester
 Brown, H. A. Rochester
 Brown, J. R. Rochester
 Brown, Philip W. Rochester
 Brunsting, L. A. Rochester
 Buie, L. A. Rochester
 Burchell, H. B. Rochester
 Burgert, E. O., Jr. Rochester
 Burke, E. C. Rochester
 Butt, H. R. Rochester
 Cain, J. C. Rochester
 Campbell, Donald C. Rochester
 Carey, J. M. Rochester
 Carr, D. T. Rochester
 Carryer, H. M. Rochester
 Chance, D. P. Rochester
 Childs, D. S., Jr. Rochester
 Childs, N. H. Rochester
 Christensen, N. A. Rochester
 Clagett, O. T. Rochester
 Clark, Edward. Rochester
 Clark, L. W. Spring Valley
 Clark, P. L., III. Rochester
 Clifton, Theodore. Chatfield
 Cofer, Vernon L., Jr. Rochester
 Colby, M. Y., Jr. Rochester
 Comfort, M. W. Rochester
 ‡Cooley, J. C. Wyoming
 Cooney, F. Rochester
 Cooper, Talbert. Rochester
 Corbin, Kendall B. Rochester
 Costello, Addis C. Rochester
 Counsellor, Virgil. Rochester
 Courtin, R. F. Worchester, Mass.
 †Coventry, M. B. Rochester
 Cowley, H. S. Kansas City, Mo.
 Craig, W. M. Rochester
 †Crenshaw, J. L. Sanford, Fla.
 Crumbley, James J. Rochester
 Culp, O. S. Rochester
 †Curtiss, R. K. Los Angeles, Cal.
 Dahlin, D. C. Rochester
 Daugherty, G. W. Rochester
 Davis, A. Rochester
 Davis, G. D. Rochester

†Davis, Harry L. Rochester
 †Davis, Neal B. Rochester
 †Davis, R. E. Geneva, N. Y.
 †Dearing, W. H. Rochester
 Denton, C. Rochester
 Devine, K. D. Rochester
 DeWeerd, J. H. Rochester
 Diessner, G. R. Rochester
 Dillard, P. G., Jr. Camp Carson, Col.
 Dixon, Claude F. Rochester
 †Doan, J. C. Rochester
 †Dobson, Ross A. Rochester
 †Dockerty, M. B. Rochester
 †Doerr, John C. Rochester
 †Donin, J. F. Rochester
 †Donoghue, F. E. Rochester
 †Douglass, B. E. Rochester
 †Doyle, James R. Rochester
 †Drips, D. G. Rochester
 †Dry, T. J. Rochester
 †Duncan, D. K. Rochester
 †Dunlap, R. W. Rochester
 †Dunn, Jack, Jr. Rochester
 †DuShane, James W. Rochester
 †Dykstra, Peter C. Rochester
 †Eaton, L. M. Rochester
 †Edwards, J. E. Rochester
 †Elkins, E. C. Rochester
 †Ellis, F. H. Rochester
 †Emmett, John L. Rochester
 †Epperson, D. P. Rochester
 †Erich, J. B. Rochester
 †Erickson, D. J. Rochester
 †Estes, J. E. Rochester
 †Eusterman, G. B. Rochester
 †Everts, A. B. Rochester
 †Evans, Eugene G., Jr. Rochester
 †Faber, J. E. Rochester
 †Faulconer, Albert, Jr. Rochester
 †Faulkner, J. W. Rochester
 †Feldman, Floyd M. New York, N. Y.
 †Ferguson, James. Rochester
 †Ferris, D. O. Rochester
 †Figi, Fredk A. Rochester
 †Forney, W. D. Rochester
 †Foss, E. L. Rochester
 †Freedman, M. A. Rochester
 †Freedman, R. H. Rochester
 †Freeman, J. G. Fergus Falls
 †Freyman, J. G. Boston, Mass.
 †Fricke, R. E. Rochester
 †Futch, William D. Rochester
 ††Gambill, C. M. Rochester
 †Garrett, Chas. N. J. R. Rochester
 †Gastineau, C. F. Rochester
 †Gaunt, W. D. Rochester
 †Geraci, J. E. Rochester
 †Ghormley, R. K. Rochester
 †Gibb, R. P. Bellingham, Wash.
 †Giberson, R. G. Rochester
 †Giffin, H. Z. Rochester
 †Gifford, R. W., Jr. Rochester
 †Gilley, E. Wayne. Rochester
 †Ginsberg, James P. Rochester
 †Ginsberg, R. L. Rochester
 †Goldstein, N. P. Rochester
 †Good, C. A., Jr. Rochester
 †Goodlad, J. H. Rochester
 †Graham, G. G. San Diego, Cal.
 †Gray, H. K. Rochester
 †Green, Robert C., Jr. Rochester
 †Greene, L. F. Rochester
 †Griffin, G. D., Jr. Rochester
 †Grindlay, J. H. Rochester
 †Gross, J. B. Rochester
 †Gulley, J. L. Rochester
 †Gustafson, M. B. Rochester
 †Gwinn, John L. Rochester
 †Habein, H. C. Rochester
 †Habein, Harold C., Jr. Rochester
 †Hagedorn, A. B. Rochester
 †Haigler, Frank H., Jr. Rochester
 †Haines, S. F. Rochester
 †Hallberg, O. E. Rochester
 †Hallenbeck, D. F. Rochester
 †Hallenbeck, G. A. Rochester
 †Hanlon, D. G. Rochester
 †Hanson, S. M. Sparta, Wis.
 †Harrington, S. W. Rochester
 †Harris, L. E. Rochester
 †Havens, F. Z. Rochester
 †Havens, F. Z., Jr. Riverside, Calif.
 †Hayes, Alvin B. Rochester
 †Heck, F. J. Rochester
 †Heilman, D. M. H. Rochester
 †Heilman, F. R. Rochester
 †Heimark, John J. Rochester
 †Helden, R. A. Rochester
 †Holland, G. M. Spring Grove
 †Holland, J. W. Spring Grove
 †Helmholz, M. F. Rochester
 †Hempstead, B. E. Rochester

Henderson, E. D. Rochester
 Henderson, J. W. Rochester
 Henderson, Lowell. Rochester
 Henderson, M. S. Rochester
 †Hendricks, Everett D. Rochester
 †Hepper, Norman G. Rochester
 †Herbert, G. M., Jr. Rochester
 †Herrell, W. E. Rochester
 †Hewitt, Edith. Rochester
 †Hewitt, E. M. Rochester
 †Heverdale, O. C. Rochester
 †Hill, J. R. Rochester
 †Hines, E. A., Jr. Rochester
 †Hodgson, J. R. Rochester
 †Hoffman, M. S. Rochester
 †Holland, C. R. Rochester
 †Hollenhorst, Robert. Rochester
 †Holman, C. B. Rochester
 †Holt, A. H. Ft. Knox, Ky.
 †Holt, Prescott B. Rochester
 †Hood, R. T. Rochester
 †Horton, B. T. Rochester
 †Howell, Llewelyn P. Rochester
 †Huizenga, K. A. Rochester
 †Hunt, A. B. Rochester
 †Hunt, William. Rochester
 †Hunter, J. S. Rochester
 †Hunter, R. C. Dayton, Ohio
 †Ivins, J. C. Rochester
 †Ivy, J. H. Rochester
 †Jackman, R. J. Rochester
 †Jackson, Richard L. Rochester
 †James, J. W. Rochester
 †Jampolis, R. W. San Francisco, Cal.
 †Jones, J. M. Rochester
 †Johnson, Adelaide McF. Rochester
 †Johnson, C. R. Rochester
 †Johnson, C. M., Jr. Rochester
 †Johnson, Einer W. Rochester
 †Johnson, R. B. Lanesboro
 †Johnston, Edward V. Rochester
 ††Jones, G. W., Ft. Leavenworth, Kan.
 †Jones, R. F. Rochester
 †Jones, Rabelcliff V. Rochester
 †Jordan, Stanley. Rochester
 †Joyce, G. L. Rochester
 †Judd, E. S., Jr. Rochester
 †Karlen, Markle. Rochester
 †Kearns, T. P. Rochester
 †Keating, F. R., Jr. Rochester
 †Keith, H. M. Rochester
 †Keith, N. M. Rochester
 †Kelly, A. H. Rochester
 †Kennedy, R. L. J. Rochester
 †Kenney, F. D. Rochester
 †Kent, G. B., Ft. Sam Houston, Texas
 †Kernohan, J. W. Rochester
 †Kiely, J. M. Rochester
 †Kiely, J. P. San Francisco, Calif.
 †Kierland, R. R. Rochester
 †Kilby, Ralph A. Charleston, S. C.
 †Kirby, Thomas J., Jr. Rochester
 †Kirklin, B. R. Rochester
 †Kirklin, J. W. Rochester
 †Klakeg, Clayton H. Rochester
 †Kleckner, M. S. Evanston, Ill.
 †Knutson, L. A. Spring Grove
 †Knutson, K. H. Rochester
 †Koelsche, G. A. Rochester
 †Kolb, Lawrence. Rochester
 †Kroboth, F. J., Jr. Rochester
 †Kroll, Harry G. Rochester
 †Krout, R. M. Rochester
 †Krusen, F. H. Rochester
 †Kunkel, Wm. M., Jr. Rochester
 †Kvale, W. F. Rochester
 †Lacy, Paul E. Rochester
 †Lake, C. F. Rochester
 †Larabee, W. F. Grosse Ile, Mich.
 †Lazarte, J. A. Rochester
 †Ledd, E. T. Rochester
 †Lemon, W. S. Clifton Falls, Va.
 †Lescoc, Richard J. Rochester
 †Lev, Ralph. Rochester
 †Lewis, B. L. Rochester
 †Lick, I. C. Rochester
 †Lillie, H. I. Rochester
 †Lillie, John C. Rochester
 †Lipscomb, P. R. Rochester
 †Liss, H. R. San Francisco, Calif.
 †Littin, E. M. Rochester
 †Loigren, Carl A. Rochester
 †Logan, Archibald H. Rochester
 †Logan, G. B. Rochester
 †Love, J. G. Rochester
 †Lundy, J. S. Rochester
 †Lyons, Henry R. Rochester
 †MacCarty, C. S. Rochester
 †MacCarty, W. C. Rochester
 †MacKenzie, D. A. Rochester
 †MacKinnon, H. N. Rochester
 †Machean, Alexander. Phoenix, Ariz.

COUNTY SOCIETY ROSTER

Madison, M. S. Rochester
Magath, T. B. Rochester
Manger, W. M. Rochester
Mankin, H. T. Rochester
Mann, H. W. Rochester
Mann, F. C. Rochester
Mann, F. D. Rochester
Mann, Joseph D. Rochester
Mann, R. H. Rochester
Manning, P. R. Illinois
Markle, G. B., IV. Virginia
Martens, T. G. Rochester
Martin, G. M. Rochester
Martin, W. J. Rochester
Masson, J. C. Rochester
Mason, J. K. Rochester
Matheson, D. R. Rochester
Maxeiner, S. R., Jr. Rochester
Mayne, J. B. Rochester
Maytum, Chas. K. Rochester
Maxwell, J. P. Rochester
Mayo, C. W. Rochester
McBean, J. B. Rochester
McBurney, R. P. Nopeming
McCarraan, S. P. Rochester
McConahey, W. M., Jr. Rochester
McDonald, J. A. Rochester
McFarlane, J. A. Rochester
McIntire, S. F. Rochester
McKaig, C. B. Pine Island
McKee, Robert E. Rochester
McMorris, R. O. Rochester
McWhorter, H. E. Rochester
Mears, Thomas W. Rochester
Medoff, Alvin S. Rochester
Menges, Charles G. H. Rochester
Merritt, W. A. Rochester
Michael, Isaac E. Rochester
Miller, J. M. Indiana
Miller, R. D. Rochester
Miller, R. H. Rochester
Millikan, Clark H. Rochester
Mills, S. D. Rochester
Minno, Alexander M. Rochester
Moersch, F. P. Rochester
Moersch, H. J. Rochester
Monson, K. J. Rochester
Montgomery, Hamilton Rochester
Moore, Ken D. Rochester
Morlock, C. G. Rochester
Morris, K. L. Rochester
Mortensen, J. D. Rochester
Morton, G. H. Scott Air Base, Illinois
Mulder, D. W. Rochester
Mussey, Mary E. Rochester
Mussey, Robert D. Rochester
Mussey, W. C. Urbana, Ill.
Myers, C., III. San Antonio, Texas
Meyers, T. T. Rochester
Myre, T. T. Paducah, Ky.
Nehring, J. P. Preston
Nelson, Wm. C. Rochester
Neuman, H. W. Rochester
Norris, N. T. Caledonia
O'Keefe, Matthew Rochester
O'Leary, P. A. Rochester
O'Shaughnessy, E. J. Rochester
Odel, H. M. Rochester
Orburn, Paul L. Rochester
Olive, J. T., Jr. Rochester
Olson, A. M. Rochester
Olson, E. A. Pine Island
Olson, G. E. West Concord
Onsgard, L. K. Houston
Openshaw, C. R. Rochester
Osborn, J. E. Rochester
Owen, Charles A. J. Rochester
Owen, H. W. Rochester
Parker, H. L. Rochester
Parker, R. L. Rochester
Parkhill, F. M. Rochester
Parsons, W. B., Jr. Rochester
Patrick, Robert T. Rochester
Paulson, J. A. Rochester
Paynter, C. R. Rochester
Pease, G. L. Rochester
Pemberton, A. H. Rochester

Pemberton, John des. Rochester
Pender, John Wm. Rochester
Perry, Harold. Rochester
Person, Waldemar W. Rochester
Peters, G. A. Rochester
Peterson, M. C. Rochester
Peterson, W. H. Spring Valley
Pettersen, George R. Rochester
Pettet, John R. Rochester
Phares, W. S. Pomona, Calif.
Piper, M. C. LaCanada, Calif.
Polley, Howard F. Rochester
Pool, T. L. Rochester
Powers, Fred H. Rochester
Powers, W. W. Rochester
Prangen, A. D. Rochester
Pratt, G. F. Rochester
Pratt, J. H., Jr. Rochester
Price, Richard D. Rochester
Prickman, L. E. Rochester
Priestley, J. T. Rochester
Pruitt, R. D. Rochester
Pugh, D. G. Rochester
Pyle, M. M. Nopeming
Quer, E. A. Rochester
Rabers, R. A. Rochester
Ralston, D. E. Rochester
Randall, L. M. Rochester
Randall, Raymond V. Rochester
Rasmussen, W. C. Rochester
Reese, G. A. Rochester
Reitemeier, R. J. Rochester
Reiter, R. A. Rochester
ReMine, P. G. Rochester
ReMine, W. H., Jr. Rochester
Rettler, Richard. Camp Rucker, Ala.
Rice, R. G. Grand Is., Neb.
Ridley, R. W. Rochester
Rigler, R. G. Portsmouth, Va.
Riper, James D. Rochester
Risser, A. F. Stewartville
Rogers, Arnold G. Rochester
Rogne, Wm. Gustav. Spring Grove
Rome, H. P. Rochester
Rommness, J. O. Rochester
Rooke, E. D. Rochester
Rosin, J. D. Baltimore, Md.
Rosen, O. M. Harmony
Routley, E. F. Saskatoon, Sask., Can.
Rovelstad, R. A. Rochester
Rucker, C. W. Rochester
Ruff, John D. Rochester
Rushton, J. G. Rochester
Rynearson, E. H. Rochester
Saidy, John T. San Mate, Calif.
Salassa, R. M. Rochester
Sanford, A. H. Rochester
Sauer, Wm. G. Rochester
Saunders, B. H., Jr. Rochester
Sayre, G. P. Rochester
Scanlon, P. W. Rochester
Scheidel, A. M. Des Moines, Iowa
Scheifley, C. H. Rochester
Scherman, O. Rochester
Schmidt, H. W. Rochester
Schmug, Francis J. Rochester
Schwarz, Ben. E. Rochester
Schock, Everett. Dayton, Ohio
Scholz, D. A. Rochester
Scudamore, H. H. Rochester
Seldon, T. H. Rochester
Shick, Richard M. Rochester
Shockett, Everett. Rochester
Sholl, P. R. Rochester
Siekert, R. G. Rochester
Silver, Arthur W. Rochester
Simmons, W. H. Rochester
Simon, Howard B. Rochester
Simonton, K. M. Rochester
Skaug, H. M. Rochester
Sloumb, C. H. Rochester
Smith, Ballard F. Rochester
Smith, C. F. Rochester
Smith, F. L. Rochester
Smith, H. L. Rochester
Smith, L. A. Rochester
Smith, M. P. Rochester
Smith, Newton D. Rochester

Soule, E. H. Rochester
Spear, H. C. Houston, Texas
Stauffer, Maurice H. Rochester
Steinhilber, R. M. Rochester
Stevens, Grant M. Rochester
Stickney, J. M. Rochester
Stilwell, G. G. Rochester
Storsteen, K. A. Rochester
Stroebel, C. F., Jr. Rochester
Struthers, Alfred M. Rochester
Stuhler, L. G. Rochester
Svien, H. J. Rochester
Symmonds, R. E. Rochester
Tarantino, Joseph C. Rochester
Taub, Robert G. Rochester
Taylor, D. E. San Diego, Calif.
Taylor, E. A. Rochester
Taylor, Gloria A. San Diego, Calif.
Taylor, L. M. Rochester
Thelen, E. P. Bethesda, Md.
Thompson, G. J. Rochester
Thompson, O. H., Jr. Rochester
Tihen, E. N. Camp Stoneman, Calif.
Tillisch, J. H. Rochester
Todd, J. W. Rochester
Tompkins, R. Rochester
Tuerk, Milton. Rochester
Uihlein, Alfred. Rochester
Ulery, Richard M. Rochester
Utne, John R. Rochester
Utz, David C. Rochester
Van Herik, Martin. Rochester
Van Vleet, M. E. Rochester
Vaughn, L. D. Rochester
Virnig, Hildegard J. Rochester
Wagner, H. P. Rochester
Wagner, James M. Harmony
Wakefield, E. G. Rochester
Wakim, K. G. Rochester
Walters, Waltman. Rochester
Wang, Jun-Chuan. Fort Sam Houston, Tex.
Ward, Bert B. Rochester
Ward, L. E. Rochester
Watkins, C. H. Rochester
Watson, Eleanor. Rochester
Watson, J. R. Rochester
Waud, R. L. Fort Ora, Calif.
Waugh, J. M. Rochester
Webb, J. H. Rochester
Weber, Harry. Rochester
Weed, L. A. Rochester
Wehr, M. P. Long Island, N. Y.
Weir, J. F. Rochester
Welch, J. S. Rochester
Wellborn, W. H., Jr. Rochester
Wellman, W. E. Rochester
Wellner, T. O. Rochester
Wente, H. A. Rochester
Wentzler, James D. Montoursville, Pa.
Westrup, J. E. Lanesboro
White, Roy A. New Orleans, La.
Wierman, Wm. H. Rochester
Wilder, Russell M. Bethesda, Md.
Wilkinson, George R., Jr. Rochester
Williams, George E. Rochester
Williams, Henry L., Jr. Rochester
Williams, L. B. Germany
Williams, R. V. Rushford
Willius, F. A. Rochester
Wilson, R. B. Rochester
Wilson, T. W. Great Lakes, Ill.
Wilson, V. O. Rochester
Wineland, R. E. New York, N. Y.
Winkelman, Richard. Rochester
Winteringer, J. R. Rochester
Wise, Fred E. Rochester
Witchow, A. W. Rochester
Wolf, John M. Rochester
Wollaeger, Eric. Rochester
Woltman, H. W. F. Rochester
Wood, Harry G. Rochester
Woolner, L. B. Rochester
Wright, S. M. Rochester
Wuest, J. H. Rochester
Young, H. H. Rochester
Zeller, W. W. Phila, Pa.

PARK REGION DISTRICT AND COUNTY MEDICAL SOCIETY

Douglas, Grant, Otter Tail and Wilkin Counties

Regular meeting date, last Wednesday even numbered months

Annual meeting, December

Number of Members—61

President
Stemsrud, H. L. Alexandria
Secretary
DeKruif, Hendrik. Fergus Falls
Arndt, H. W. Detroit Lakes
Baker, J. L. Fergus Falls

Baker, N. H. Fergus Falls
Bergquist, K. E. Battle Lake
Blakey, A. R. Osakis
Boline, C. A. Battle Lake
Boyd, L. M. Alexandria
Boysen, Peter Bemidji

Cain, J. H. Hoffman
Carlson, C. E. Alexandria
Clifford, G. W. Alexandria
Combacker, L. C. Fergus Falls
Daehlin, Rolf. Fergus Falls
DeKruif, Hendrik. Fergus Falls

COUNTY SOCIETY ROSTER

Emerson, E. E. Osakis
Estrem, C. O. Fergus Falls
Estrem, R. D. Fergus Falls
Estrem, R. L. Fergus Falls
Hammon, John S. Fergus Falls
Hanson, E. C. New York Mills
Hanson, LeRoy Pelican Rapids
Harris, Evelyn S. Fergus Falls
Heiberg, E. A. Fergus Falls
Helseth, H. K. Pelican Rapids
Hom, Leong Y. W. Battle Lake
Jacobson, C. W. Breckenridge
Kevern, J. L. Henning
Korda, H. A. Pelican Rapids
Leibold, H. H. Parkers Prairie
Lewis, A. J. Henning

Lewis, C. W. Henning
Love, F. A. Carlos
Lund, C. J. T. Fergus Falls
Mortensen, N. G. Minneapolis
Mouritsen, G. J. Fergus Falls
Naegeli, Frank Fergus Falls
Nelson, David E. Alexandria
Nelson, Roy A. Fergus Falls
Nelson, W. O. B. Fergus Falls
O'Brien, L. T. Breckenridge
Ostergaard, Erling Evansville
Paciotti, Vincent St. Paul
Parson, E. L. B. Elbow Lake
Parson, L. R. Elbow Lake
Patterson, W. L. Fergus Falls
Paulson, T. S. Fergus Falls

Randall, A. M. Ashby
Richter, E. H. Fergus Falls
Rockwood, P. H. Fergus Falls
Satersmoen, Theo. Pelican Rapids
Sather, E. R. Alexandria
Schamber, W. F. Parkers Prairie
Schoenberger, F. B. Perham
Shaver, Ward Fergus Falls
Stemsrud, H. L. Alexandria
Sutton, H. R. Hoffman
Tanquist, Edwin J. Alexandria
Thompson, H. B. St. Cloud
Warner, J. J. Perham
Wasson, L. F. Alexandria
Weyhrauch, R. A. Phoenix, Ariz.
Wray, W. E. Campbell

RAMSEY COUNTY MEDICAL SOCIETY

Regular meetings, last Monday in every month excepting June, July, August

Annual meeting, last Monday in January

Number of Members—471

President
Donohue, P. F. Saint Paul
Secretary
Hilger, Lawrence D. Saint Paul
Adair, A. F. Jr. Saint Paul
Aherns, A. H. Saint Paul
Aherns, A. E. Saint Paul
Aherns, R. M. Saint Paul
Alden, J. F. Jr. Saint Paul
Anderson, R. W. Saint Paul
Arnuist, A. S. Saint Paul
Arny, F. P. Saint Paul
Arzy, P. K. Saint Paul
Aurelius, J. R. Saint Paul
Ausman, D. R. Saint Paul
Babb, Frank S. Saint Paul
Bacon, D. K. Saint Paul
Baer, Walter Saint Paul
Balcome, M. M. Saint Paul
Barnett, J. M. Saint Paul
Baronofsky, I. D. Minneapolis
Barry, L. W. Saint Paul
Barsness, N. O. N. Saint Paul
Bauer, D. D. Saint Paul
Bauer, E. L. Saint Paul
Beals, Hugh Saint Paul
Beech, R. H. Saint Paul
Beek, H. O. Saint Paul
Beer, J. J. Saint Paul
Bell, C. G. Saint Paul
Bellomo, James New York, N. Y.
Benep, J. L. Saint Paul
Benton, P. H. Isway, Mont.
Bentley, N. P. Saint Paul
Bernier, M. J. No. St. Paul
Bernstein, Wm. C. Saint Paul
Bick, J. F. Saint Paul
Binger, H. E. Phoenix, Ariz.
Black, E. J. Saint Paul
Black, R. N. Saint Paul
Boeckman, N. Egil Saint Paul
Bolender, H. L. Saint Paul
Bolin, Robt. C. Saint Paul
Borg, J. F. Saint Paul
Bouma, L. R. Saint Paul
Brand, G. D. Saint Paul
Bray, E. R. Saint Paul
Briggs, John F. Saint Paul
Brodie, T. E. Saint Paul
Brown, J. C. Los Gatos, Calif.
Bulinski, T. J. Saint Paul
Burch, E. P. II. Saint Paul
Burch, F. E. Two Harbors
Burklund, E. C. Saint Paul
Burlingame, D. A. Saint Paul
Burmeister, Richard Saint Paul
Burns, R. M. Saint Paul
Burton, C. G. Saint Paul
Bush, R. P. Saint Paul
Busher, H. H. Saint Paul
Cain, C. L. Saint Paul
Callahan, F. F. Saint Paul
Carley, W. A. Saint Paul
Carroll, W. C. Saint Paul
Cedarleaf, Cherry B. Saint Paul
Chadbourne, C. R. Saint Paul
Chatterton, C. C. Saint Paul
Christiansen, A. Saint Paul
Clark, H. B. Jr. Minneapolis
Cochrane, B. B. Saint Paul
Coddon, W. D. Saint Paul
Cohen, Ellis N. Saint Paul
Colby, W. L. Saint Paul
Cole, W. H. Saint Paul
Coleman, John Saint Paul
Collie, H. G. St. Petersburg, Fla.

Connolly, C. J. Saint Paul
Connor, C. E. Saint Paul
Cook, C. K. Saint Paul
Cooper, C. C. Saint Paul
Countryman, R. S. Saint Paul
Craig, D. M. Saint Paul
Critchfield, L. R. Saint Paul
Crowley, J. H. Saint Paul
Crudo, V. D. Saint Paul
Crump, J. W. Saint Paul
Culligan, J. M. Saint Paul
Culver, C. G. Saint Paul
Davis, Edward Saint Paul
Dawson, J. R. Saint Paul
Decker, C. H. Saint Paul
Derauf, B. L. Saint Paul
Deters, D. C. Saint Paul
Dickson, T. H. Saint Paul
Donohue, P. F. Saint Paul
Drake, C. B. Saint Paul
Dunn, J. N. Saint Paul
Earl, G. A. Saint Paul
Earl, J. R. Saint Paul
Edlund, Gustaf Saint Paul
Edwards, J. W. Saint Paul
Edwards, L. G. Saint Paul
Edwards, T. J. Saint Paul
Eginton, C. T. Saint Paul
Ely, O. S. So. Saint Paul
Emerson, E. C. Saint Paul
Emmons, R. W. Saint Paul
Endress, E. K. Saint Paul
Enroth, O. E. Saint Paul
Ernest, G. C. H. St. Petersburg, Fla.
Ersfeld, M. P. Saint Paul
Eshelby, E. C. Saint Paul
Evert, J. A. Jr. Saint Paul
Fahey, E. W. Saint Paul
Farakas, I. V. Saint Paul
Fee, J. G. Saint Paul
Felder, Davitt A. Saint Paul
Felton, A. J. Saint Paul
Ferguson, J. C. Saint Paul
Fesler, H. H. Saint Paul
Field, A. H. Farmington
Fink, D. L. Saint Paul
Fisher, D. W. Saint Paul
Flanagan, H. F. Saint Paul
Flannery, H. F. Saint Paul
Flynn, I. L. Jr. Saint Paul
Fogarty, C. W. Saint Paul
Fogarty, C. W. Jr. Saint Paul
Fogelberg, E. J. Saint Paul
Foley, F. E. B. Saint Paul
Forsythe, J. R. Saint Paul
Freeman, C. D. Jr. Saint Paul
Freeman, G. L. Saint Paul
Friedman, L. L. Saint Paul
Fritz, W. L. Saint Paul
Froats, C. W. Saint Paul
Fuller, B. F. Saint Paul
Furnell, D. O. Saint Paul
Galligan, John J. Saint Paul
Garbrecht, A. W. Saint Paul
Gardner, W. P. Saint Paul
Garrow, D. M. Saint Paul
Gehlen, J. N. Saint Paul
Ghent, C. H. Saint Paul
Gibbs, E. C. Saint Paul
Gilkey, S. E. Saint Paul
Gillespie, D. R. Saint Paul
Gleason, W. A. Saint Paul
Goldsmith, J. W. Saint Paul
Goltz, E. V. Saint Paul
Goltz, N. F. Saint Paul
Grant, H. W. Saint Paul
Gratzek, Thos. Saint Paul

Grau, R. K. Saint Paul
Gruenhagen, A. P. Saint Paul
Hall, Bernard Saint Paul
Hammes, E. M. Saint Paul
Hammes, E. M., Jr. Saint Paul
Hammond, J. E. Saint Paul
Hanson, H. B. Saint Paul
Harbaugh, John Saint Paul
Harmon, G. E. Saint Paul
Hartfel, W. F. Saint Paul
Hartig, Marjorie Saint Paul
Hartley, E. C. Saint Paul
Hauser, V. P. Saint Paul
Hayes, A. F. Saint Paul
Heck, W. W. Saint Paul
Hedenstrom, F. G. Saint Paul
Heilig, William R. Saint Paul
Henderson, A. J. G. No. Saint Paul
Hengstler, W. H. Saint Paul
Hensel, C. N. Saint Paul
Herman, S. M. Saint Paul
Heron, R. C. Saint Paul
Herrmann, E. T. Saint Paul
Hertz, M. J. Saint Paul
Hilger, J. A. Saint Paul
Hilger, L. D. Saint Paul
Hilker, Marcus D. Saint Paul
Hiniker, L. P. Saint Paul
Hochflizer, J. J. Saint Paul
Hodgson, J. E. Saint Paul
Holcomb, O. W. Saint Paul
Hollinshead, W. H. Saint Paul
Holmen, R. W. Saint Paul
Holt, J. E. Saint Paul
Hopkins, G. W. Saint Paul
Howard, M. A. Saint Paul
Howard, W. S. Saint Paul
Howe, N. W. Saint Paul
Hullsiek, H. E. Saint Paul
Hullsiek, R. B. Minneapolis
Hultgen, W. J. Saint Paul
Hunter, M. H. Saint Paul
Hurwitz, M. M. Saint Paul
Ide, Arthur W. Saint Paul
Ikeda, Kano. Saint Paul
Ingerson, C. A. Saint Paul
James, Ellery Saint Paul
Jannsen, Martin Saint Paul
Jarvis, M. A. Saint Paul
Jesion, J. W. Saint Paul
Johanson, W. E. G. Saint Paul
Johnson, C. E. Saint Paul
Johnson, Herbert Saint Paul
Johnson, R. J. Saint Paul
Jones, E. Mendelssohn Saint Paul
Jones, R. H. Minneapolis
Kamman, G. R. Saint Paul
Kaplan, D. H. Saint Paul
Karon, I. M. Saint Paul
Kasper, E. M. Saint Paul
Katz, L. J. Long Beach, Calif.
Kavitt, H. H. Portland, Ore.
Keefe, R. E. Saint Paul
Kelly, J. V. Saint Paul
Kelsey, C. M. Saint Paul
Kenebeck, E. J. Saint Paul
Kenyon, T. J. Saint Paul
Kesting, Herman Saint Paul
King, G. L. Saint Paul
Klein, H. N. Saint Paul
Klein, Jos. Saint Paul
Knutson, G. E. Saint Paul
Knutson, Robert Saint Paul
Koza, D. N. Saint Paul
Krezowski, Thomas Saint Paul

COUNTY SOCIETY ROSTER

Kugler, A. A. Saint Paul
Kuske, A. W. Saint Paul
Kusske, D. R. Saint Paul
Lannin, B. G. Saint Paul
Lannin, D. R. Saint Paul
Larsen, C. L. Saint Paul
Larson, Eva-Jane Saint Paul
Larson, J. T. So. Saint Paul
Larson, K. R. Saint Paul
Larson, M. L. Saint Paul
Lax, Morris H. Saint Paul
Leahy, Bartholomew Saint Paul
Leavenworth, R. O. Saint Paul
Lee, N. J. Tracy
Leick, R. M. Saint Paul
Leitch, Archibald Saint Paul
Lepak, J. A. Saint Paul
Lerche, Wm. Cable, Wis.
Leven, N. L. Saint Paul
Leverenz, C. W. Saint Paul
Levin, B. G. Saint Paul
Levitt, George X. Saint Paul
Lick, C. L. Saint Paul
Lick, Wm. J. Jr. Saint Paul
Lieberman, N. S. So. Saint Paul
Lien, R. J. Saint Paul
Lighthour, E. L. Saint Paul
Lilleberg, N. J. Saint Paul
Lindell, Robt. Saint Paul
Lippman, H. S. Saint Paul
Loken, S. M. Saint Paul
Lowe, E. R. So. Saint Paul
Lowe, T. A. So. Saint Paul
Lucas, John E. Seattle, Wash.
Lundholm, A. M. Saint Paul
Lynch, F. W. Saint Paul
Mackoff, S. M. Saint Paul
Madden, J. F. Saint Paul
Madland, R. S. Saint Paul
Maertz, Wm. F. Saint Paul
Malerich, J. A. Saint Paul
Marks, R. W. Saint Paul
Marlow, G. V. Saint Paul
Martin, D. L. Saint Paul
Martineau, J. L. Saint Paul
Matthews, James H. Minneapolis
McCabe, S. Saint Paul
McCain, D. L. Saint Paul
McCarthy, J. J. Saint Paul
McCarthy, Wm. R. Saint Paul
McClanahan, J. H. White Bear Lake
McClanahan, T. S. White Bear Lake
McCloud, C. N. Saint Paul
McEwan, Alexander. Saint Paul
McGroarty, B. J. Saint Paul
McKenzie, E. E. Saint Paul
McLaren, J. M. Minneapolis
Meade, J. R. Saint Paul
Mears, B. J. Saint Paul
Medelman, J. P. Saint Paul
Melancon, J. F. Saint Paul
Menold, Wm. F. Saint Paul
Merner, T. B. Faribault
Merrick, R. L. Saint Paul
Meyerding, E. A. Saint Paul
Michienzi, L. J. Saint Paul
Miller, Wm. T. W. Saint Paul
Miller, Z. R. Saint Paul
Milnar, F. J. Saint Paul
Moga, John A. Saint Paul
Molander, H. A. Saint Paul
Monahan, Robert H. Saint Paul
Mooney, Robert D. Saint Paul
Moquin, M. A. Saint Paul
Moren, J. A. Saint Paul
Moriarity, Bernice Saint Paul
Moriarity, Cecile R. Saint Paul
Muller, A. E. No. Saint Paul
Mundahl, H. R. Saint Paul
Murphy, J. T. Saint Paul
Naegeli, A. E. Port Beach, Calif.
Nash, L. A. Saint Paul

Nelson, L. A. Saint Paul
Nimlos, K. O. Saint Paul
Nimlos, L. O. Saint Paul
Noble, J. F. Saint Paul
Noble, J. L. Saint Paul
Nye, Katherine A. Saint Paul
Nye, Lillian L. Saint Paul
O'Brien, J. C. Saint Paul
O'Connor, L. J. Saint Paul
O'Kane, T. W. Saint Paul
O'Leary, John B. Saint Paul
O'Malley, V. Saint Paul
O'Reilly, B. E. Saint Paul
Ockuly, Orville Saint Paul
Ogden, Warner Saint Paul
Ohage, Justus Saint Paul
Olson, R. L. Saint Paul
Olson, C. A. Saint Paul
Ostergren, Edw. W. Saint Paul
Ouellette, A. J. Saint Paul
Owens, F. M., Jr. Saint Paul
Paulson, Wallace Saint Paul
Pearson, F. R. Saint Paul
Pearson, M. M. Saint Paul
Pedersen, A. H. Saint Paul
Peterson, D. B. Saint Paul
Peterson, D. H. Saint Paul
Peterson, H. O. Saint Paul
Peterson, J. L. E. Saint Paul
Plondke, F. J. Saint Paul
Plotke, H. L. Saint Paul
Polksi, P. G. So. Saint Paul
Quattlebaum, Frank Saint Paul
Ralph, J. R. Saint Paul
Ramsey, W. R. Saint Paul
Rasmussen, R. C. Saint Paul
Ravita, H. G. Saint Paul
Rea, Charles Saint Paul
Reid, James W. Saint Paul
Richards, E. T. F. Saint Paul
Richardson, E. J., Jr. Saint Paul
Richardson, R. J. Saint Paul
Rick, Paul F. W. Saint Paul
Rinke, Eugene Saint Paul
Ritchie, W. P. Saint Paul
Ritt, A. E. Saint Paul
Robinson, C. O. Saint Paul
Rogers, S. F. Saint Paul
Rogin, Norton Saint Paul
Rorig, D. H. Saint Paul
Rollie, O. O. Saint Paul
Rosenholtz, B. I. Saint Paul
Rosenthal, Robert Saint Paul
Roth, G. C. Saint Paul
Rothschild, H. J. Saint Paul
Roy, Phil C. Saint Paul
Ruhberg, Geo. N. Tarzana, Calif.
Ryan, John Saint Paul
Ryan, Jos. M. Saint Paul
Sandeen, R. M. Buffalo
Sarnecki, M. M. Saint Paul
Satterlund, V. L. Saint Paul
Savage, F. J. Saint Paul
Schmidtke, R. L. Saint Paul
Schoch, R. B. J. Saint Paul
Schons, Edward Saint Paul
Schroekenstein, H. F. Saint Paul
Schmidt, F. C. Saint Paul
Schulze, A. G. Saint Paul
Schumacker, J. W. Robbinsdale
Schwyzer, H. C. Saint Paul
Schwyzer, Marguerite Saint Paul
Scott, E. E. Saint Paul
Sekhon, M. S. Saint Paul
Sells, Richard J. Saint Paul
Senkler, G. E. Saint Paul
Setzer, H. J. Saint Paul
Shannon, Wm. R. Saint Paul
Shellman, J. L. Pacific Palisades, Cal.
Short, Jacob Saint Paul
Siegel, Clarence Saint Paul

Siegel, S. C. Saint Paul
Simons, L. T. Saint Paul
Singer, B. J. Saint Paul
Skinner, Abbott Saint Paul
Skinner, H. O. Saint Paul
Smisek, E. A. Saint Paul
Smith, Clyde Saint Paul
Smith, V. D. E. Saint Paul
Snyder, Geo. Wm. Saint Paul
Sohlberg, O. I. Saint Paul
Sommers, Ben. Saint Paul
Sorem, M. B. Saint Paul
Soucheray, P. H. Saint Paul
Souster, B. B. Saint Paul
Sowada, Ernest J. Saint Paul
Sprafka, J. L. Saint Paul
Sprafka, J. M. Saint Paul
Steinberg, C. L. Saint Paul
Sterner, D. C. Saint Paul
Sterner, E. G. Saint Paul
Sterner, E. R. Saint Paul
Sterner, J. J. Saint Paul
Stewart, Alexander Saint Paul
Stolpestad, A. H. Saint Paul
Stolpestad, H. L. Saint Paul
Strate, G. E. Saint Paul
Straus, M. L. Saint Paul
Strem, E. L. Saint Paul
Sturley, R. F. Saint Paul
Swain, F. M. Saint Paul
Swanson, J. A. Saint Paul
Swanson, L. J. West Saint Paul
Swenson, J. J. Saint Paul
Swenson, Donald B. Saint Paul
Teisberg, J. E. Saint Paul
Tettie, James Saint Paul
Thompson, F. A. Saint Paul
Thoreson, M. C. Bernice
Tiff, C. R. So. Saint Paul
Tongen, L. A. Saint Paul
Tracht, R. R. Saint Paul
Travis, J. S. Saint Paul
Tregilgas, H. R. So. Saint Paul
Van Bergen, F. H. Minneapolis
Varco, R. L. Saint Paul
Veirs, Dean M. Saint Paul
Veirs, Ruby J. S. Saint Paul
Venables, A. E. Saint Paul
Waas, C. W. Saint Paul
Walker, A. E. Saint Paul
Walsh, Edw. F. Saint Paul
Walter, C. H. Saint Paul
Ward, Peter D. Saint Paul
Warren, C. A. Saint Paul
Watson, P. T. Saint Paul
Watson, W. H. A. Saint Paul
Watson, W. J. Newport
Watz, C. E. Saint Paul
Webber, F. L. Saint Paul
Weis, B. A. Saint Paul
Weisberg, Maurice Saint Paul
Wenzel, G. P. Saint Paul
Wesolowski, S. P. Saint Paul
Westover, D. E. Saint Paul
Wheeler, M. W. Lake Elmo
Wilkinson, Stella L. Newport
Williams, A. B. Saint Paul
Williams, C. K. Saint Paul
Williams, J. A. Saint Paul
Wilson, J. A. Saint Paul
Wilson, J. V. Saint Paul
Winnick, J. B. Saint Paul
Wolf, K. C. Saint Paul
Wolkoff, H. J. Saint Paul
Word, H. L. Saint Paul
Wurdemann, A. L. White Bear Lake
Youngren, E. R. Saint Paul
Zachman, L. L. Saint Paul
Zimmermann, H. B. Saint Paul

RED RIVER VALLEY MEDICAL SOCIETY

Kittson, Mahanomen, Marshall, Norman, Pennington, Polk, Red Lake and Roseau Counties

Regular meetings, three—plus extras

Annual meeting, December

Number of Members—70

President
Delmore, John L., Jr. Roseau
Secretary
Sather, Russell O. Crookston
Adkins, C. M. Thief River Falls
Anderson, W. E. Clearbrook
Behling, F. L. Moorhead
Behr, O. K. Crookston
Berge, D. O. Roseau
Berlin, A. S. Hallock

Biedermann, Jacob Thief River Falls
Boyer, G. S. Crookston
Bratrud, Edward Thief River Falls
Bratrud, T. E. Thief River Falls
Brink, A. A. Baudette
Burnett, Clem. F., Jr. Crookston
Cameron, J. H. Crookston
Covey, K. W. Mahanomen
Dale, L. N. Red Lake Falls
Delmore, J. L. Roseau

Delmore, J. L., Jr. Roseau
Delmore, R. J. Roseau
Erickson, Eskil Halstad
Feigl, W. M. Thief River Falls
Flancher, L. H. Crookston
Greene, D. E. Thief River Falls
Henney, Wm. H. McIntosh
Hollands, W. H. Fisher
Holmstrom, C. H. Warren
Janecky, A. G. Baudette

COUNTY SOCIETY ROSTER

Johnson, H. C. San Diego, Cal.
 Johnson, R. E. Ah-Gwah-Ching
 Kinkade, B. R. Ada
 Kirk, G. P. East Grand Forks
 Klefsad, L. H. Greenbush
 Kletsch, Harold D. Brooklyn, N. Y.
 Knutson, G. A. Hallock
 Kostick, W. R. Fertile
 Loken, Theodore. Ada
 McDonald, W. J. Crookston
 McKaig, A. M. Red Lake Falls
 Melby, O. F. Thief River Falls
 Mercil, W. F. Crookston
 Nelson, Alfred S. Baltimore, Md.
 Nelson, H. E. Crookston

Nelson, Kenneth L. Warroad
 Nickerson, N. D. Fairmont
 Norman, J. E. Crookston
 O'Leary, J. H. Thief River Falls
 Oppegaard, C. L. Crookston
 Oppegaard, M. O. Crookston
 Parker, Philip. Thief River Falls
 Puumala, E. E. Warren
 Quigley, W. P. Brooklyn, N. Y.
 Reff, A. R. Crookston
 Roholt, C. L. McIntosh
 Roholt, H. B. Fosston
 Rowell, Forrest A. Thief River Falls
 Ryland, A. D. Minneapolis
 Sather, E. L. Fosston

Sather, G. A. Fosston
 Sather, R. N. Fosston
 Sather, R. O. Crookston
 Skogerboe, R. B. Karlstad
 Stadem, Clifford. Twin Valley
 Starekow, M. D. Thief River Falls
 Stewart, D. E. Crookston
 Stone, Norman F. Chicago, Ill.
 Thysell, Harold. Crookston
 Torgerson, W. B. Oklee
 Uhley, C. G. Crookston
 Van Rooy, G. T. Thief River Falls
 Watson, R. M. Morris
 Wheeler, G. S. Roseau
 Wikoff, Howard. Crookston
 Wiltrout, I. G. Oslo

RENNVILLE-REDWOOD COUNTY MEDICAL SOCIETY

Regular meeting, second Tuesday of each month

Annual meeting, December

Number of Members—19

President
 Cosgriff, J. A., Jr. Olivia
Secretary
 Pierce, R. B. Renville
 Alcorn, W. J. Wabasso
 Anderson, C. A. Hector
 Anderson, D. C. Lamberton
 Brand, W. A. Redwood Falls

Cosgriff, J. A. Olivia
 Cosgriff, James A., Jr. Olivia
 Dahle, Manford B. Olivia
 Diessner, A. W. Redwood Falls
 Dordal, John. Sacred Heart
 Fawcett, A. M. Renville
 Gaines, E. C. Buffalo Lake
 Hinderaker, H. P. Bird Island

Johnson, O. H. Norfolk, Nebraska
 Johnson, W. E. Morgan
 Knoche, H. A., Jr. Morgan
 Lenz, J. R. Morton
 McLeod, J. J. Japan
 Nelson, Glenn E. Fairfax
 Pierce, Robert B. Renville
 Preisinger, J. W. Renville

RICE COUNTY MEDICAL SOCIETY

Regular meeting, third Tuesday of every month

Annual meeting, October

Number of Members—35

President
 Street, Bernard. Northfield
Secretary
 Meyer, Paul F. Faribault
 Beaton, J. Gordon. Northfield
 Bruhl, H. H. Faribault
 Buesgens, R. H. Waterville
 Dugay, N. S. Northfield
 Engberg, E. J. Faribault
 Francis, D. W. Morristown
 Hanson, A. M. Faribault
 Hanson, J. W. Northfield
 Huxley, F. R. Faribault

Kennedy, G. L. Faribault
 Kolars, J. J. Faribault
 Kucera, L. B. Lonsdale
 Lende, Norman. Faribault
 Lexa, F. J. Lonsdale
 Maertz, R. W. Faribault
 Meers, R. F. Northfield
 Meyer, E. C. Kenyon
 Meyer, P. F. Faribault
 Meyer, Robert P. Faribault
 Moses, R. R. Kenyon
 Navratil, D. R. Montgomery
 Nielson, A. M. Northfield

Nuetzman, A. W. Faribault
 Orr, Burton A. Faribault
 Petersen, D. H. Northfield
 Robilliard, C. M. Faribault
 Rohrer, Christian. Des Moines, Iowa
 Rumpf, C. W. Faribault
 Rysgaard, G. M. Northfield
 Stevenson, F. W. Faribault
 Street, Bernard. Northfield
 Studer, D. J. Faribault
 Traeger, C. A. Faribault
 Weaver, P. H. Faribault
 Wilson, W. E. Northfield

ST. LOUIS COUNTY MEDICAL SOCIETY

Carlton, Cook, Itasca, Lake and St. Louis Counties

Regular meetings, second Thursday of each month

Annual meeting, January

Number of Members—255

President
 Buckley, R. P. Duluth
Secretary
 Van Ryzin, D. J. Duluth
 Abraham, A. L. Hibbing
 Adams, B. S. Gilbert
 Addy, E. R. Duluth
 Ager, E. A. Duluth
 Ahrens, C. F. Duluth
 Arhelger, Stuart. Minneapolis
 Arko, J. L. Hibbing
 Athens, Alvin G. Duluth
 Backus, R. W. Nopeming
 Bagley, C. M. Duluth
 Bagley, E. C. Duluth
 Bagley, Wm. R. Duluth
 Baich, V. M. Bovey
 Bakklia, H. E. Duluth
 Bardon, Richard. Duluth
 Barker, J. D. Duluth
 Barney, L. A. Duluth
 Barrett, E. E. Duluth
 Becker, F. T. Duluth
 Benell, O. E. Virginia
 Bepko, Marie K. Cloquet
 Berdez, G. L. Duluth
 Bergan, R. L. Duluth
 Bianco, A. J. Duluth
 Bianco, A. J., Jr. Duluth
 Binet, H. E. Grand Rapids
 Blackmore, S. C. Biwabik
 Bloom, J. Duluth
 Bolstad, Owen C. Duluth
 Bolz, J. A. Grand Rapids
 Boman, P. G. Duluth
 Bowen, R. L. Hibbing

Boyer, S. H. Duluth
 Boyer, S. H., Jr. Duluth
 Braun, O. C. Grand Rapids
 Bray, P. N. Duluth
 Brooker, W. J. New York
 Buckley, R. P. Duluth
 Butler, J. K. Cloquet
 Cantwell, Wm. F. International Falls
 Chapman, T. L. Duluth
 Chermak, F. G. International Falls
 Christensen, C. H. Duluth
 Clark, C. L. Duluth
 Clark, E. A. Duluth
 Clark, I. T. Duluth
 Coll, J. J. Duluth
 Collins, A. N. Moose Lake
 Conley, F. W. Duluth
 Cope, H. E. Virginia
 Coventry, Wm. A. Duluth
 Coventry, Wm. D. Duluth
 Detjen, E. D. Bigfork
 Dickson, Franklin H., Jr. Proctor
 Dittrich, R. L. Duluth
 Doyle, G. C. Duluth
 Dwyer, John J. Duluth
 Eckman, P. F. Duluth
 Eckman, R. J. Duluth
 Ekblad, J. Wm. Duluth
 Eklund, C. D. Duluth
 Elias, Frank J. Duluth
 Emmanuel, Karl Wm. Duluth
 Eppard, R. M. Cloquet
 Erickson, G. P. Hibbing
 Erskine, G. N. Grand Rapids
 Estrem, T. A. Hibbing
 Evensta, John B. Grand Rapids

Fawcett, K. R. Duluth
 Fellows, M. F. Duluth
 Ferrell, C. R. Grand Rapids
 Feuling, J. C. Grand Rapids
 Fisher, M. McC. Duluth
 Fisketti, Henry. Duluth
 Flynn, Bernard F. Hibbing
 Fredericks, M. G. Duluth
 Fuller, Josiah. Duluth
 Gillespie, M. G. Duluth
 Goldish, D. R. Duluth
 Goodman, Chase. Virginia
 Gowan, L. R. Duluth
 Graham, Archibald W. Chisholm
 Grahek, J. P. Ely
 Grinley, A. V. Grand Rapids
 Haavik, J. E. Duluth
 Halbert, J. J. Duluth
 Halliday, P. V. Minneapolis
 Halper, Bernard. Hibbing
 Haney, Claude L. Duluth
 Hansen, R. E. Marysville, Calif.
 Hanson, E. O. Carlton
 Harris, C. N. Hibbing
 Hatch, W. E. Duluth
 Hayes, M. F. Nashauk
 Hedberg, G. A. Nopeming
 Heiam, Wm. C. Cook
 Hildebrand, J. E. Bemidji
 Hilding, A. C. Duluth
 Hill, F. E. Duluth
 Hirschboeck, F. J. Duluth
 Hoff, H. O. Duluth
 Houkom, S. S. Duluth
 Hutchinson, H. Moose Lake
 Indihar, John E. Virginia

COUNTY SOCIETY ROSTER

Irwin, Homer R. Hibbing
Jacobson, Clarence. Chisholm
Jacobson, F. C. Duluth
Jensen, T. J. Duluth
Jeronimus, H. J. Duluth
Jessico, C. M. Duluth
Joffe, H. H. Virginia
Johnson, Edward. Virginia
Johnson, K. E. Duluth
Johnsrud, L. W. Hibbing
Johnston, R. O. Hibbing
Jolin, F. M. Bovey
Karges, L. E. Camp Atterbury, Ind.
Kelley, Walter. Duluth
Kelly, A. C. Duluth
Kelly, R. T. Nashauk
Keyes, R. W. Ely
Klein, Harry. Duluth
Klein, Wm. A. Duluth
Knapp, F. N. Duluth
Knoll, W. V. Duluth
Kohlbr, C. O. Duluth
Koskela, Lauri Shaker Heights, Ohio
Kotchevar, F. R. Eveleth
Kozberg, Oscar. Moose Lake
Krueger, V. R. Nopeming
LaBree, R. H. Duluth
Laird, A. T. Duluth
Latterell, K. E. Duluth
Law, Harrison E. Virginia
Lepak, F. J. Duluth
Litman, S. N. Duluth
Lovshin, W. C. Eveleth
Luth, D. V. Minneapolis
MacDonald, Roger A. Little Fork
MacFarlane, P. H. Chisholm
MacRae, G. C. Duluth
Magney, F. H. Duluth
Magraw, R. M. Minneapolis
Malmstrom, J. A. Virginia
Marclay, W. J. Minneapolis
Martin, W. C. Duluth
Mayne, R. M. Nopeming
McCarty, P. D. Ely
McCoy, M. K. Duluth
McDonald, A. L. Duluth
McDonald, O. G. Duluth
McHaffie, L. O. Duluth
McKenna, M. J. Grand Rapids
McLeod, J. L. Grand Rapids
McNutt, J. R. Duluth
Mead, C. H. Duluth

Merriman, L. L. Duluth
Meyer, J. O. Grand Rapids
Minty, E. W. Duluth
Moe, R. J. Duluth
Moe, Thos. Moose Lake
Moehring, H. G. Duluth
Mollers, T. P. Soudan
Monroe, P. B. Cloquet
Monserud, N. O. Cloquet
Morsman, L. W. Hibbing
Moyer, J. B. Duluth
Munson, M. S. Barnum
Murray, R. A. Hibbing
Neff, W. S. Virginia
Nelson, R. L. Duluth
Nicholson, M. A. Duluth
Nisius, George F. Duluth
Norberg, C. E. Cloquet
Nutting, R. E. Duluth
Olson, A. E. Duluth
Olson, A. O. Duluth
O'Neill, J. C. Duluth
Paciotti, V. J. St. Paul
Papermaster, Ralph. Two Harbors
Parker, O. W. Duluth
Parson, E. I. Duluth
Pasek, A. W. Cloquet
Pasek, E. A. Chicago City
Patch, O. B. Duluth
Pearsall, R. P. Virginia
Pedersen, R. C. Duluth
Pennie, D. F. V. Duluth
Peterson, E. N. Virginia
Peterson, J. H. Duluth
Pierce, J. R. Virginia
Power, J. E. Duluth
Puumala, R. H. Cloquet
Raadquist, C. S. Hibbing
Raattama, John. Keewatin
Rajala, Arnold. Grand Rapids
Reed, Paul. Virginia
Rokala, H. E. Virginia
Rood, D. C. Santa Barbara, Calif.
Rowe, O. W. Duluth
Rowles, E. K. Coleraine
Rudie, P. S. Duluth
Rukavina, John G. Hibbing
Runquist, J. M. Duluth
Ryan, Wm. J. Duluth
Sach-Rowitz, A. Moose Lake
Salter, R. A. Virginia
Sandell, S. T. Nopeming

Sanford, J. B. Battle Creek, Mich.
Sarrif, O. E. Duluth
Sax, S. G. Duluth
Sax, S. G. Duluth
Schirber, M. J. Grand Rapids
Schmid, J. F. Duluth
Schneider, L. E. Duluth
Schroeder, C. H. Pottstown, Penn.
Schweiger, T. R. Hibbing
Seashore, R. T. Duluth
Sher, D. A. Virginia
Siegel, J. S. Virginia
Sinamar, Andrew. Hibbing
Sisler, C. E. Grand Rapids
Smith, C. M. Duluth
Smith, W. R. Grand Marais
Snyker, O. E. Ely
Spang, A. J. Duluth
Spang, J. S. Duluth
Spang, William M. Duluth
Strandjord, N. M. New York, N. Y.
Strathern, M. L. Gilbert
Strauss, E. C. Duluth
Strewler, G. J. Duluth
Strobel, Wm. G. Duluth
Sutherland, H. N. Ely
Swedberg, Wm. A. Duluth
Swenson, A. O. Duluth
Teich, K. W. Duluth
Terrell, B. J. Nopeming
Tetlie, J. F. Camp Carson, Colo.
Thiem, C. E. Hibbing
Tingdale, Carlyle. Hibbing
Tosseland, N. E. Duluth
Tuohy, E. L. Duluth
Urberg, S. E. Duluth
Van Ryzin, D. J. Duluth
Van Valkenberg, J. D. New York, N. Y.
Walder, H. J. Duluth
Walker, A. E. Duluth
Wallace, M. O. Duluth
Walter, F. H. International Falls
Wells, A. H. Duluth
Wheeler, D. W. Duluth
Williams, B. F. P. Duluth
Winter, J. A. Duluth
Ylitalo, W. H. Rochester
Young, T. O. Duluth
Zupanc, Edward. San Francisco, Calif.

SCOTT-CARVER COUNTY MEDICAL SOCIETY

Regular meetings, second Tuesday of each month

Annual meeting, June

Number of Members—30

President
Schimelpfenig, G. T. Chaska
Secretary
Rynda, E. R. New Prague
Bratholdt, James. Watertown
Buck, F. H. Shakopee
Cervenka, C. F. New Prague
Doherty, E. M. New Prague
Hebeisen, M. B. Chaska
Heinz, Ivy B. Shakopee
Heinz, L. H. Shakopee

Juergens, H. M. Belle Plaine
Juergens, J. L. Belle Plaine
Kline, R. F. Montgomery
Kortsch, F. P. Prior Lake
Kucera, S. T. Northfield
Larson, Laren. Watertown
Martin, T. P. Arlington
Nagel, H. D. Waconia
Ninneman, N. N. Waconia
Novak, E. E. New Prague
Olson, C. J. Belle Plaine
Pearson, B. F. Shakopee

Pearson, R. T. Shakopee
Pogue, R. E. Watertown
Ponterio, J. E. Shakopee
Riesch, Elizabeth K. Jordan
Rynda, E. R. New Prague
Sanford, J. A. Savage
Schimelpfenig, G. T. Chaska
Simons, B. H. Chaska
Stahler, P. A. Jordan
Westerman, Alvin. Montgomery
Westerman, F. C. Montgomery

SOUTHWESTERN MINNESOTA MEDICAL SOCIETY

Cottonwood, Jackson, Murray, Nobles, Pipestone and Rock Counties

Regular meetings, on call

Annual meetings, on call

Number of Members—66

President
Wells, W. B. Jackson
Secretary
Heiberg, O. M. Worthington
Ahrens, H. G. Worthington
Anderson, O. W. Luverne
Arnold, E. W. Adrian
Bader, J. L. Slayton
Balmer, A. L. Pipestone
Basinger, H. P. Windom
Basinger, H. R. Mountain Lake
Beckering, Gerrit. Edgerton
Benjamin, W. G. Pipestone
Bofenkamp, F. W. Luverne
Boone, E. S. Luverne
Brown, A. H. Pipestone
Braica, S. M. Worthington
Buresh, Ken. L. Westbrook
Carlson, J. V. Westbrook
Christiansen, H. A. Jackson
Chunn, S. S. Pipestone
DeBoer, Hermanus. Edgerton
Doman, V. W. Lakefield

Doms, Vernon A. Elbow Lake
Hallin, R. P. Worthington
Halleran, W. H. Jackson
Halpern, D. J. Brewster
Harrison, P. W. Worthington
Heiberg, O. M. Worthington
Hoyer, L. J. Windom
Karlsen, B. N. Jackson
Kilbride, E. A. Worthington
Koenecke, Fred H., Jr. Lakefield
Kotval, R. J. Pipestone
Laikola, L. A. Adrian
Lohmann, J. G. Pipestone
Maitland, E. T. Jackson
Manson, F. M. Worthington
Martin, A. C. Luverne
Minge, R. K. Worthington
Nealy, D. E. Adrian
Nelson, C. A. Worthington
Nickerson, J. R. Heron Lake
Nywall, D. D. Slayton
Pankratz, P. J. Mountain Lake
Patterson, H. D. Slayton
Paulson, Elmer. Worthington

Philip, David R. Windom
Pierson, R. F. Slayton
Piper, W. A. Mountain Lake
Plucker, Milton W. Clarkfield
Ritzinger, Frederick. Lakefield
Robnett, R. W. Worthington
Rose, J. T. Lakefield
Sawtell, Robert R. Jeffers
Schade, F. L. Worthington
Schutz, E. S. Mountain Lake
Sherman, C. L. Luverne
Slater, S. A. Worthington
Sogge, L. L. Windom
Stam, John. Worthington
Stanley, C. R. Worthington
Sterrie, Norman A. Worthington
Stevenson, B. M. Fulda
Stratte, H. C. Windom
Watkins, J. A. Windom
Wells, W. B. Jackson
Williams, Chas. A. Pipestone
Williams, L. A. Minneapolis
Williamson, H. A. Heron Lake
Wolf, H. B. Camdon, Conn.

COUNTY SOCIETY ROSTER

STEARNS-BENTON COUNTY MEDICAL SOCIETY

Regular meeting, third Thursday of each month
Annual meeting, December

Number of Members—62

President
Gaida, Joseph.....St. Cloud
Secretary
Clark, H. B.....St. Cloud

§ Anderson, E. M.....St. Cloud
§ Andrews, Bernice F.....Holdingford
§ Baumgartner, F. H.....Albany
§ Beaumais, J. B.....St. Cloud
† Brigham, C. F., Sr.....St. Cloud
§ Brigham, C. F., Jr.....St. Cloud
† Broker, H. M.....Minneapolis
§ Buscher, J. C.....St. Cloud
§ Cesnik, R. J.....St. Cloud
§ Clark, H. B.....St. Cloud
§ Cleaves, W. D.....Sauk Centre
§ Donaldson, C. S.....St. Cloud
§ DuBois, J. F., Sr.....Sauk Centre
§ DuBois, J. F., Jr.....Sauk Centre
§ Engstrom, G. F.....Belgrade
§ Evans, Leslie.....Sauk Rapids
§ Fidelman, N. E.....Foley
§ Fleming, T. N.....St. Cloud

*§ Friesleben, Wm.....Sauk Rapids
Gaida, J. B.....St. Cloud
Goehrs, G. H.....St. Cloud
† Goehrs, H. W.....St. Cloud
Grant, J. C.....Sauk Centre
§ Halenbeck, P. L.....St. Cloud
§ Henry, J. E.....Milaca
Hoeft, David.....Holdingford
Jones, R. N.....St. Cloud
Keith, Paul J.....Milaca
Kelly, J. F.....Cold Spring
§ Koop, S. H.....Richmond
Kuhlmann, L. B.....Melrose
Lewis, C. B.....St. Cloud
Libert, J. N.....St. Cloud
Lindeman, R. J.....Montgomery, Ala.
Luckemeyer, C. J.....St. Cloud
Mahowald, Aloys.....Fergus Falls
McDowell, J. P.....St. Cloud
Meyer, A. A.....Melrose
Mihaupt, E. N.....St. Cloud
Musachio, N. F.....Foley
Myre, C. R.....Paynesville

§ Neils, V. E.....Sauk Rapids
Nietfield, Aloys.....Sauk Centre
Nessa, C. B.....St. Cloud
O'Keefe, J. P.....St. Cloud
Peterson, R. T.....St. Cloud
Phares, O. C.....St. Cloud
Raeitz, S. J.....Maple Lake
Reif, H. J.....St. Cloud
Richards, W. B.....St. Cloud
Sandven, N. O.....Paynesville
Schatz, F. J.....St. Cloud
† Schmitz, Everett J.....Seattle, Wash.
† Sherwood, G. E.....Kimball
† Simon, T. R.....St. Cloud
Sisk, H. E.....St. Cloud
Stangl, P. E.....St. Cloud
VanVeet, Francis.....St. Cloud
Veranth, L. A.....St. Cloud
Walfred, K. A.....St. Cloud
Wenner, W. T.....St. Cloud
† Wetzell, E. V.....St. Cloud
Wittrock, L. H.....Watkins
Zachman, A. H.....Melrose

STEELE COUNTY MEDICAL SOCIETY

Regular meetings, called by the officers
Annual meeting, February

Number of Members—22

President
Wilowske, R. J.....Owatonna
Secretary
Schaefer, J. F.....Owatonna

§ Anderson, F. C.....Owatonna
§ Arnesen, J. F.....Owatonna
§ Dewey, D. H.....Owatonna
§ Ertel, E. Q.....Ellendale

§ Fischer, J. R.....Blooming Prairie
Halvorsen, D. K.....Owatonna
Hartung, E. H.....Claremont
Kulstad, O. S.....Dodge Center
Kurtin, Joseph J.....Blooming Prairie
Kurtin, H. J.....Blooming Prairie
Lundquist, C. W.....Owatonna
McEaney, C. T.....Owatonna
McIntyre, J. A.....Owatonna

§ Melby, Benedik.....Blooming Prairie
Morehead, D. E.....Owatonna
Nelson, E. J.....Faribault
Olson, A. J.....Owatonna
Roberts, O. W.....Owatonna
Schaefer, J. F.....Owatonna
Senn, E. W.....Owatonna
Stransky, T. W.....Owatonna
Wilowske, R. J.....Owatonna

UPPER MISSISSIPPI MEDICAL SOCIETY

Aitkin, Beltrami, Cass, Clearwater, Crow Wing, Hubbard, Koochiching, Lake of the Woods,
Morrison, Todd and Wadena Counties

Regular meetings quarterly
Annual meeting, January

Number of Members—93

President
Will, C. B.....Bertha
Secretary
Badeaux, G. L.....Brainerd

§ Anderson, W. W.....Brainerd
Badeaux, G. L.....Brainerd
Beise, R. A.....Brainerd
Bender, J. H.....Brainerd
Benson, A. H.....Little Falls
Borgerson, A. H.....Long Prairie
† Brown, H. M.....Walker
Cardle, G. E.....Brainerd
Cosuit, F. C.....Aitkin
Cook, J. M.....Staples
Coombs, C. H.....Cass Lake
† Corrigan, J. E.....Spoonerville
Craig, C. C.....International Falls
Crow, E. R.....Hot Springs, S. D.
Cushing, R. L.....Brainerd
Davis, Lloyd T.....Wadena
§ Davis, Luther F.....Wadena
Davis, Thos. L., Jr.....Wadena
DeWeese, W. J.....Bemidji
Eiler, John.....Park Rapids
§ Erickson, A. O.....Long Prairie
Fitzsimons, Wm. E.....Brainerd
§ Fortier, G. M. A.....Little Falls
Franklin, G. W.....Northome
Garlock, A. V.....Bemidji
Garlock, D. H.....Bemidji
† Garlock, G. L.....Bemidji
Ghoshley, Mary C.....Puposky

† Gilmore, Rowland.....Crookston
Griffin, John, Jr.....Bemidji
*† Grogan, John S.....Wadena
Groschup, T. P.....Bemidji
Grose, F. N.....Clarrissa
Haimar, W. B.....Wadena
Halme, W. B.....Wadena
§ Hanover, R. D.....International Falls
Hartjen, J. K.....Bemidji
Healy, R. T.....Pierz
† Heine, G. W.....Little Falls
Hendricks, E. J.....Saint Paul
Higgs, W. W.....Park Rapids
† Hoganson, D. E.....Bemidji
† House, Z. E.....Burbank, Calif.
Houston, D. M.....Park Rapids
Hubbard, O. E.....Brainerd
† Johnson, C. E.....Saint Paul
Johnson, D. L.....Little Falls
† Johnson, E. W.....Bemidji
Kanne, E. R.....Brainerd
Kelly, J. H.....Wadena
Kinports, E. B.....International Falls
Knight, E. G.....Swanville
Larson, L. J.....Bagley
Lee, Hubert W.....Brainerd
Leggett, Elizabeth.....Bemidji
§ Lenarz, A. J.....Browerville
Longfellow, Helen W.....Brainerd
Lund, W. J.....Staples
Lundsten, L. C.....Bemidji
§ Marshall, C. M.....Crosby
McCann, D. F.....Bemidji
† McCreary, M. D.....Oceanside, Calif.

McLane, W. O.....Brainerd
Mosby, M. E.....Long Prairie
Mulligan, A. M.....Brainerd
Nelson, N. P.....Minneapolis
Nixon, J. B.....Crosby
Olson, Lillian A.....Ah-Gwah-Ching
Palmer, H. A.....Blackduck
Parker, C. W.....Wadena
§ Parker, W. E.....Sebaka
Petraborg, H. T.....Aitkin
Pierce, C. H.....Wadena
§ Quanstrom, V. E.....Brainerd
Ringle, O. F.....Walker
Rozycki, A. T.....Pine River
Rutherford, W. C.....Brainerd
Sanderson, A. G.....Anoka
Schmitz, G. P.....Little Falls
§ Schwyzzer, Arnold G. Ah-Gwah-Ching
Simmons, E. J.....Saint Paul
Skaife, William F.....Little Falls
Stein, R. J.....Pierz
† Stoy, R. A.....Little Falls
§ Thabes, J. A., Sr.....Brainerd
Thabes, J. A., Jr.....Brainerd
Vandersluis, C. W.....Bemidji
§ Watson, A. M.....Royalton
Watson, Percy T.....Northfield
§ Watson, S. W.....Royalton
Whittemore, D. D.....Bemidji
§ Will, C. B.....Bertha
Will, W. W.....Bertha
Williams, M. M.....Ah-Gwah-Ching
Wingquist, C. G.....Crosby
† Zeigler, Charles M.....Pine River

COUNTY SOCIETY ROSTER

WABASHA COUNTY MEDICAL SOCIETY

Annual meeting, first Thursday after the first Monday in October

Other meetings as called by the President

Number of Members—15

President
Bayley, E. C. Lake City
Secretary
Wilson, W. F. Lake City
§ Bayley, E. C. Lake City
§ Bouquet, B. J. Wabasha

§ Bowers, R. N. Lake City
Collins, J. S. Wabasha
Ekstrand, L. M. Wabasha
Ellis, E. W. Elgin
Flesche, B. A. Lake City
Gjerde, W. P. Lake City
Glabe, R. A. Plainview

§ Mahle, D. G. Plainview
§ Ochsner, C. G. Wabasha
† Replogie, W. H. Los Angeles, Calif.
‡ Vaughn, C. G., Ft. Leonard Wd., Mo.
‡ Wellman, T. G. Clinton, Iowa
† Wilson, W. F. Lake City

WASECA COUNTY MEDICAL SOCIETY

Regular meetings, as decided

Annual meeting, January

Number of Members—10

President
Swenson, O. J. Waseca
Secretary
Normann, S. T. Waseca
§ Davis, R. D. Waseca

Florine, Martin. Janesville
† Gallagher, B. J. Waseca
† Gallagher, W. B. Vienna, Austria
Hottinger, R. C. Janesville
McIntire, H. M. Waseca

§ Normann, S. T. Waseca
Oeljen, S. C. G. Waseca
Olds, G. H. New Richland
Swenson, O. J. Waseca
§ Wadd, C. T. Janesville

WASHINGTON COUNTY MEDICAL SOCIETY

Regular meetings, second Tuesday in each month

Annual meeting, November

Number of Members—19

President
Johnson, Ray G. Stillwater
Secretary
Carlson, R. E. Stillwater
§ Carlson, R. E. Stillwater
Fosbender, Herman. Hastings
§† Haines, J. H. Stillwater

Holcomb, Joel T., Marine-on-St. Croix
Hooper, Worth. Hastings
Humphrey, W. R. Stillwater
Jenson, J. E. Stillwater
Johnson, R. G. Stillwater
Josewski, R. J. Stillwater
Jurgens, M. F. Stillwater
Kulzer, Norbert. Hastings

§ McCarten, F. M. Stillwater
Mensheha, Nicholas. Forest Lake
Peck, Lewellyn R. Hastings
† Poirier, Jos. A. Forest Lake
Ruggles, G. M. Forest Lake
Sherman, C. H. Bayport
Stuhr, J. W. Stillwater
Van Meier, Henry. Stillwater

WEST CENTRAL MINNESOTA MEDICAL SOCIETY

Big Stone, Pope, Stevens and Traverse Counties

Regular meetings, first Wednesday in March, May, September and November

Annual meeting, first Wednesday in November

Number of Members—32

President
Gericke, J. T. Glenwood
Secretary
Plasha, M. K. Glenwood
Arneson, A. I. Morris
Barnett, G. L. Graceville
Behmmer, F. W. Morris
Bergan, Otto. Clinton
Bolsta, Charles. Ortonville
Bucher, F. D. Starbuck
Dahle, M. B. Olivia
§† Eberlin, E. A. Glenwood

§ Eide, O. A. Hancock
Elsey, E. M. Glenwood
Elsey, J. R. Glenwood
† Fitzgerald, E. T. Rial, Calif.
Gericke, J. T. Glenwood
Giesen, A. F. Starbuck
Hedemark, H. H. Ortonville
Hedemark, T. A. Ortonville
Karn, J. F. Ortonville
Kooda, J. C. Morris
Lindberg, A. L. Wheaton
§† Linde, Herman. Cyrus

McIver, Bert A. Lowry
§ Magnuson, A. E. Wheaton
Merrill, R. W. Morris
Muir, W. F. Browns Valley
O'Donnell, D. M. Ortonville
Oliver, I. L. Graceville
Plasha, M. K. Glenwood
Ransom, M. L. Hancock
§ Rossberg, R. A. Morris
§ Salk, R. J. Sauk Rapids
§ Swedenburg, P. A. Glenwood
Wagner, N. W. Graceville

WINONA COUNTY MEDICAL SOCIETY

Regular meeting, first Monday in January, April, July and October

Annual meeting in January

Number of Members—28

President
Schmidt, Hilmar R. Winona
Secretary
Finkelnburg, W. O. Winona
Benoit, F. T. Winona
Boardman, D. V. Winona
Christensen, E. E. Winona
Finkelnburg, W. O. Winona
Hartwich, R. F. Winona
Heise, Carl v R. Winona
Heise, Paul. Winona

§ Heise, W. F. C. Winona
Heise, W. v R. Winona
Johnston, L. F. Winona
Keyes, J. D. Winona
Loomis, G. L. Winona
Mattison, P. A. Winona
Meinert, A. E. Winona
Neumann, C. A. Lewiston
Page, R. L. St. Charles
§† Robbins, C. P. Winona
Roemer, H. J. Winona

§ Rogers, C. W. Winona
Rollins, Pat. St. Charles
Satterlee, H. W. Lewiston
Schmidt, H. E. Winona
Steiner, I. W. Winona
§† Tweedy, G. J. Winona
Tweedy, J. A. Winona
Vollmer, F. J. Winona
Wilson, R. H. Winona
Woltjen, M. J. Rushford
Younger, L. L. Winona

WRIGHT COUNTY MEDICAL SOCIETY

Regular meetings every three months

Annual meeting, October

Number of Members—15

Presidents
Sandeem, R. M. Buffalo
Secretary
Catlin, T. J. Buffalo
Anderson, W. P. Buffalo
Bendix, L. H. Annandale

§† Catlin, J. J. Buffalo
Catlin, T. J. Buffalo
Ellison, F. E. Monticello
Greenfield, W. T. Cokato
Grundset, O. J. Montrose
§ Guilfoile, P. F. Delano
Hagen, Kristofer. Cokato

Hall, W. E. Maple Lake
§ Hart, W. E. Monticello
Larson, Loren J. Minneapolis
§† Ridgway, A. M. Annandale
Smorsczok, M. Monticello
Thielen, R. D. Saint Michael
§ Thomas, William H. Howard Lake

Alphabetic Roster

Key to Symbols: *Deceased; †Affiliate or Life Member; ‡In Service.

Aanes, A. M. Red Wing
 † Aborn, W. H. Hawley
 Abraham, A. L. Duluth
 Abramson, Milton Minneapolis
 Achor, R. W. P. Rochester
 Adair, A. F., Jr. St. Paul
 Adams, B. S. Hibbing
 Adams, R. C. Rochester
 Addy, E. R. Gilbert
 Adkins, C. D. Minneapolis
 † Adkins, C. M. Thief River Falls
 Adkins, G. H. Sandstone
 Affeldt, D. E. Kasson
 Aga, John Rochester
 Ager, E. A. Duluth
 Agustsson, Hreidar Minneapolis
 Ahern, E. E. Minneapolis
 Aherns, A. E. St. Paul
 Ahlfs, J. J. Caledonia
 † Ahrens, Albert E. St. Paul
 † Ahrens, A. H. Sandstone
 Ahrens, C. F. Duluth
 Ahrens, H. G. Worthington
 Ahrens, R. M. St. Paul
 † Aitkens, H. B. LeCenter
 Akins, W. M. Red Wing
 Albrecht, H. H. Chisago City
 Alcorn, Wm. J. Wabasso
 † Alden, J. F., Jr. St. Paul
 Alexander, H. A. Minneapolis
 Aling, C. A. Minneapolis
 Allen, E. V. N. Rochester
 Allen, John H. Montevideo
 Allen, Raymond A. Rochester
 Allison, D. D. Litchfield
 Altnow, H. O. Minneapolis
 † Amberg, Samuel Rochester
 Andersen, H. A. Rochester
 Andersen, S. C. Minneapolis
 Anderson, A. S. St. Louis Park
 Anderson, Chester A. Hector
 Anderson, Chester A. Madison, Wis.
 † Anderson, D. C. Lambertton
 † Anderson, D. D. Minneapolis
 Anderson, D. M. Minneapolis
 Anderson, D. P. Austin
 † Anderson, E. D. Minneapolis
 Anderson, E. M. St. Cloud
 † Anderson, E. R. Minneapolis
 † Anderson, Frank J. Ft. Leavenworth, Kans.
 Anderson, F. T. Owatonna
 Anderson, H. J. Austin
 Anderson, J. J. Mankato
 Anderson, K. W. Minneapolis
 † Anderson, Milton Rochester
 Anderson, M. J. Rochester
 Anderson, Margaret Mankato
 Anderson, Richard W. St. Paul
 Anderson, Roger L. Detroit Lakes
 Anderson, U. S. Minneapolis
 Anderson, W. E. Clearbrook
 Anderson, W. P. Buffalo
 Anderson, Wallace R. Austin
 Anderson, W. W. Brainerd
 Anderson, Wm. H. Minneapolis
 Anderson, Wm. T. Minneapolis
 Andreassen, E. C. St. Paul
 † Andrejek, A. R. Minneapolis
 Andresen, K. D'A. Minneapolis
 Andrews, B. F. Holdingford
 Andrews, R. S. Minneapolis
 Andrews, R. N. Mankato
 Ankner, F. J. Minneapolis
 Archer, Willard E. Anoka
 † Ardan, Nicholas, Jr. Rochester
 Arends, A. L. Minneapolis
 Arey, S. L. Minneapolis
 † Arhelger, Stuart Minneapolis
 Arko, J. L. Hibbing
 Arlander, C. E. Minneapolis
 Arling, L. S. Minneapolis
 Armstrong, R. S. Winnebago
 Armstrong, Wilbur A. Rochester
 Arndt, H. Wm. Detroit Lakes
 Arnesen, J. F. Owatonna
 Arnson, A. I. Morris
 Arnold, Anna W. Minneapolis
 Arnold, E. Wm. Adrian
 Arnquist, A. S. St. Paul
 Arny, F. P. St. Paul

Arvidson, Carl G. Minneapolis
 Arzt, P. K. Saint Paul
 Athens, A. G. Duluth
 † Atmore, Wm. Brooklyn
 † Aune, Martin Minneapolis
 † Aurand, Wm. H. Minneapolis
 Aurelius, J. R. Saint Paul
 Ausman, D. R. Saint Paul
 Austrian, Sol Cosmos
 † Baars, C. W. Camp Cook, California
 Babb, F. S. Saint Paul
 Backus, R. W. Nopeming
 Bacon, D. K. Saint Paul
 Badeaux, George I. Brainerd
 Bader, J. L. Slayton
 Baer, Walter Saint Paul
 † Bagby, G. W. Ft. Leonard Wood, Mo.
 Baggenstoss, A. H. Rochester
 Baggenstoss, O. J. Minneapolis
 Bagley, C. M. Duluth
 Bagley, Elizabeth C. Duluth
 Bagley, Wm. R. Duluth
 Bahn, R. C. Rochester
 Baich, V. M. Bovey
 † Bain, R. C. San Francisco, Calif.
 Bair, Hugo L. Rochester
 Baird, J. W. Minneapolis
 Baird, Raymond I. Lake Crystal
 Baken, M. P. Minneapolis
 Baker, A. B. Minneapolis
 Baker, A. T. Minneapolis
 Baker, G. S. Rochester
 Baker, H. L., Jr. Rochester
 Baker, H. R. Hayfield
 Baker, Jeanette L. Fergus Falls
 † Baker, Loe Minneapolis
 Baker, M. E. Minneapolis
 Baker, N. H. Fergus Falls
 Baker, P. L. Rochester
 Baker, R. H. Madison, Wis.
 Bakklia, H. E. Duluth
 Balcome, M. M. Saint Paul
 † Balfour, D. C. Rochester
 Balfour, Wm. M. Rochester
 Balkin, S. G. Minneapolis
 Balmer, A. I. Pipestone
 † Bank, H. E. Portland, Oregon
 Banner, E. A. Rochester
 Barber, Tracy E. Austin
 Bardon, Richard Duluth
 Barger, J. A. Rochester
 Barker, J. D. Duluth
 Barker, N. W. Rochester
 Barnett, G. L. Graceville
 Barnett, J. M. Saint Paul
 Barney, L. A. Duluth
 † Barno, Alex. St. Louis Park
 Baronofsky, I. D. Minneapolis
 Barr, L. C. Albert Lea
 Barr, Ronald Minneapolis
 Barr, M. M. Montevideo
 Barr, R. N. Minneapolis
 Barrett, E. E. Duluth
 Barrett, J. W. Rochester
 Barron, J. J. Minneapolis
 Barron, Moses Minneapolis
 Barron, S. S. Minneapolis
 Barry, L. W. Saint Paul
 † Barsness, Nellie O. N. Saint Paul
 Bartholomew, L. G. Rochester
 Basinger, H. R. Mountain Lake
 Basinger, Homer P. Windom
 Bastron, I. A. Rochester
 Batdorf, B. N. Good Thunder
 Bauer, E. L. Saint Paul
 Baumgartner, F. H. Albany
 † Baxter, S. H. Minneapolis
 Bayley, E. C. Lake City
 Bayard, E. D. Rochester
 Beach, Northrup Minneapolis
 Beahrs, O. H. Rochester
 † Beals, Hugh Saint Paul
 † Beard, A. H. Deephaven
 Beard, E. F. Rochester
 Beaton, J. Gordon Northfield
 † Becker, A. M. Minneapolis
 Becker, F. T. Duluth
 † Becker, S. Wm., Jr. Chicago
 Beckering, Gerrit Edgerton
 Bedford, E. Wm. Minneapolis
 Beech, R. H. Saint Paul

Beck, Harvey O. Saint Paul
 Beer, J. J. Saint Paul
 † Behling, F. L. Barston, Calif.
 † Behmler, F. W. Morris
 Behr, O. K. Crookston
 Beirstein, Samuel Minneapolis
 Beise, R. A. Brainerd
 Beiswanger, R. H. Minneapolis
 Bell, C. C. Saint Paul
 † Bell, E. T. Minneapolis
 † Bellomo, James New York, N.Y.
 Bellville, T. P. Minneapolis
 Belzer, M. S. Minneapolis
 Bender, J. H. Brainerd
 † Bender, L. F. San Diego, Calif.
 Bendix, L. H. Annandale
 Benedict, Wm. L. Rochester
 Benell, O. E. Virginia
 Benepe, J. L. St. Paul
 Benesh, L. A. Minneapolis
 † Benjamin, A. E. Minneapolis
 Benjamin, E. G. Minneapolis
 Benjamin, H. G. Minneapolis
 Benjamin, W. G. Pipestone
 Bennett, Warren A. Rochester
 † Bennion, P. H. Isway, Mont.
 Benoit, Clair Rochester
 † Benoit, F. T. Winona
 Benson, A. H. Little Falls
 Benson, E. S. Minneapolis
 Benson, L. M. Tracy
 Bentley, N. P. Rochester
 Benus, Richard S. Saint Paul
 Bepko, Marie K. Cloquet
 Berdez, G. L. Duluth
 Berens, James Rochester
 Bergan, Otto Clinton
 Bergan, R. O. Duluth
 Berge, D. O. Roseau
 Berge, H. L. Mora
 † Berge, Henry B. Rochester
 † Berge, Kenneth Rochester
 Berger, A. G. Minneapolis
 Bergh, G. S. Minneapolis
 Bergh, S. M. Minneapolis
 Bergman, O. B. Saint James
 Berquist, K. E. Battle Lake
 † Berkman, David Oronoco
 Berkman, J. M. Rochester
 Berkwitz, N. J. Minneapolis
 Berlin, A. S. Hallock
 Berman, Reuben Minneapolis
 † Bernatz, P. E. Decorah, Iowa
 Bernier, M. J. North Saint Paul
 Bernstein, Irving C. Minneapolis
 Bernstein, Wm. C. Saint Paul
 Bessen, A. N., Jr. Minneapolis
 Bessen, D. H. Buffalo Lake
 † Bessen, Wm. A. Minneapolis
 Beuning, J. B. Saint Cloud
 Beyer, Eugene Brahm
 Bianco, A. J. Duluth
 † Bianco, Anthony J., Jr. Duluth
 Bickel, J. F. Saint Paul
 Bickel, Wm. H. Rochester
 † Biedermann, Jacob Thief River Falls
 Bieter, R. N. Minneapolis
 † Bigelow, C. E. Dodge Center
 Bigler, Earl E. Perham
 Bigler, Ivane Perham
 Bilka, P. J. Minneapolis
 Binder, M. R. Minneapolis
 † Binet, H. E. Grand Rapids
 † Binger, H. E. Phoenix, Ariz.
 Black, B. M. Rochester
 Black, E. J. Saint Paul
 Black, Wm. A. New Ulm
 Blackmore, S. C. Biwabik
 Blake, A. J. Hopkins
 Blake, I. A. Hopkins
 Blake, P. S. Hopkins
 † Blakey, A. R. Osakis
 Block, M. A. Rochester
 Bloedel, T. I. G. Osseo
 Blomberg, Wm. R. Princeton
 Bloom, Joseph Duluth
 Bloom, N. B. Minneapolis
 Blumberg, H. B. Fairmont
 Blumenthal, J. S. Minneapolis
 Boardman, D. V. Winona
 † Rock, R. A. Saint Paul
 Rodaski, Albert A. Tivler
 † Bodelson, A. H. Pensacola, Fla.

ALPHABETICAL ROSTER

† Boeckmann, Egil Saint Paul
Bocher, J. J., Jr. Minneapolis
Bofenkamp, Benj. Laverne
Bofenkamp, F. Wm. Minneapolis
Bohn, D. G. Minneapolis
Boies, L. R. Minneapolis
Boislander, H. L. Saint Paul
† Bolin, Robert C. Saint Paul
† Boline, C. A. Battle Lake
† Bolsta, Chas. Ortonville
Bolstad, Owen C. Duluth
Bolz, J. A. Grand Rapids
Boman, P. G. Duluth
Boody, G. J., Jr. Dawson
Boone, E. S. Laverne
† Booth, A. E. Minneapolis
Boothby, W. M. Albuquerque, N. M.
† Borden, C. W. Minneapolis
Borg, J. F. Saint Paul
Borgerson, A. H. Long Prairie
Borgeson, E. J. Minneapolis
Borman, C. N. Minneapolis
Borowicz, Leonard A. Minneapolis
Bosland, H. G. Willmar
Bossert, C. S. Mora
Bostwick, J. L. Montgomery, Ala.
† Boswell, J. T. Portsmouth, N. J.
† Bottolfson, B. T. Moorhead
† Bouma, L. R. Saint Paul
Bouquet, B. J. Wabasha
Bowen, R. L. Hibbing
Bowers, G. G. Minneapolis
Bowers, R. N. Lake City
† Bowes, Donald E. Rochester
† Bowes, Earl Rochester
Boyd, D. A., Jr. Rochester
Boyd, L. M. Alexandria
Boyer, G. S. Crookston
Boyer, Saml. H. Duluth
Boyer, Saml. H., Jr. Duluth
Boynnton, Ruth E. Minneapolis
Boysen, Herbert Madelia
† Boysen, Peter Bemidji
Brasch, A. W. Rochester
† Branch, Wm. F. Rochester
† Braber, P. F. Bagley
Bradley, N. J. Willmar
Brady, Joan V. Rochester
Brand, Geo. D. Saint Paul
† Brand, Wm. A. Redwood Falls
† Brandenburg, John T. Rochester
Bransburg, R. O. Rochester
Bransham, D. S. Saint Peter
Bratholdt, James Watertown
Bratrud, A. F. Minneapolis
† Bratrud, Edward. Thief River Falls
Bratrud, Theo. E. Thief River Falls
Bratrud, E. J. Saint James
Braun, O. C. Grand Rapids
Braun, Robert A. Rochester
Bray, E. R. Saint Paul
Bregel, F. N. Duluth
† Breitenbacher, R. B. Saint James
Brekke, Harvey J. Minneapolis
Brickley, P. M. Rochester
Bridge, E. V. Cannon Falls
Briggs, J. F. Saint Paul
† Brigham, C. F. Saint Cloud
† Brigham, C. F., Jr. Saint Cloud
Brill, Alice K. Minneapolis
Brimley, C. O. Rochester
Brink, A. A. Baudette
Brink, D. M. Hutchinson
Brink, Wm. R. Rochester
Broadbent, J. C. Rochester
Broadie, T. E. Saint Paul
Brodie, W. D. Saint Paul
† Broker, H. M. Minneapolis
† Brooks, W. J. New York, N. Y.
Brooks, Charles N. Minneapolis
Brown, Alexander Rochester
† Brown, A. H. Pipestone
Brown, E. D. Paynesville
Brown, H. A. Rochester
† Brown, H. M. Walker
† Brown, I. C. Los Gatos, Cal.
Brown, J. R. Rochester
Brown, Philip W. Rochester
Brown, Wm. D. Minneapolis
Bruhl, H. H. Faribault
Brunson, L. A. Rochester
Brusegard, J. F. Red Wing
Bzicza, S. M. Worthington
Bucher, F. D. Starbuck
Buchstein, H. F. Minneapolis
Ruck, F. H. Shakopee
Buckley, R. P. Duluth
Buesgens, R. H. Waterville
Buie, L. A. Rochester
Buirge, R. E. Minneapolis
Bulinski, T. J. Saint Paul
Bulkley, Kenneth Minneapolis
Bunker, B. W. Anoka
Burch, E. P., II. Saint Paul

† Burch, F. E. Two Harbors
Burchell, H. B. Rochester
Burgert, E. O., Jr. Rochester
Burke, E. C. Rochester
Burklund, E. C. Saint Paul
Burlingame, D. A. Saint Paul
Burneister, Richard Saint Paul
Burnett, Clem. F. Crookston
Burnham, W. H. Minneapolis
Burns, Catherine Albert Lea
Burns, F. M. Milan
Burns, M. A. Milan
Burns, R. M. Saint Paul
Burseth, E. C. Mora
Burton, C. G. Saint Paul
† Buscher, J. C. Saint Cloud
Bush, R. P. Saint Paul
Bushard, W. H. Minneapolis
Bushier, H. H. Saint Paul
Butler, J. K. Cloquet
Butt, Hugh R. Rochester
Butturff, C. R. Freeborn
Butzer, J. A. Mankato
Buzelle, L. K. Minneapolis
Cable, M. L. Minneapolis
Cabot, C. M. Minneapolis
Cabot, V. S. Minneapolis
Cady, L. H. Mankato
Cain, C. L. Saint Paul
Cain, J. C. Rochester
Cain, J. H. Hoffman
Cairns, R. J. Redwood Falls
† Calhoun, F. W. Albert Lea
Callahan, F. F. Saint Paul
Callahan, Isabel L. Minneapolis
Cameron, J. H. Crookston
Campbell, D. C. Rochester
Campbell, L. M. Minneapolis
Campbell, O. J. Minneapolis
Cantwell, Wm. F. International Falls
Caplan, Leslie Minneapolis
† Card, Wm. F. Great Lakes, Ill.
† Cardie, G. E. Minneapolis
Carey, J. B. Minneapolis
Carey, J. M. Rochester
Carlander, L. W., Jr. Minneapolis
Carley, W. A. Saint Paul
Carlson, C. E. Alexandria
Carlson, J. V. Westbrook
Carlson, Lawrence Minneapolis
Carlson, L. T. Minneapolis
Carlson, N. C. Newport Beach, Calif.
Carlson, R. E. Stillwater
Carlson, Vernon J. Fargo
Caron, R. P. Minneapolis
Carr, David T. Rochester
Carroll, Wm. C. Saint Paul
Carryer, H. M. Rochester
Carpers, C. G. Minneapolis
† Catlin, J. J. Buffalo
Catlin, T. J. Buffalo
Cavoor, F. V. Minneapolis
Cedarleaf, C. B. Saint Paul
Ceder, E. T. Minneapolis
Cesnik, C. F. New Prague
Cesnik, R. J. Saint Cloud
Chadbourne, C. R. Saint Paul
Chadbourne, W. A. Minneapolis
Chalgren, Wm. S. Mankato
Challman, S. A. Minneapolis
Chambers, W. C. Blue Earth
Chance, D. P. Rochester
Chapman, C. B. Minneapolis
Chapman, T. L. Duluth
Chatterton, C. C. Saint Paul
Chavez, D. A. Minneapolis
Chermak, P. G. International Falls
Chesley, A. J. Saint Paul
Chesler, M. D. Minneapolis
† Childs, N. H. Rochester
Childs, D. C., Jr. Rochester
Chisholm, T. C. Minneapolis
Christensen, C. H. Duluth
Christensen, E. E. Winona
Christensen, L. E. Minneapolis
† Christensen, Mentor Mississippi
Christensen, N. A. Rochester
Christiansen, Andrew Saint Paul
Christiansen, H. A. Jackson
Christianson, H. W. Minneapolis
Christoferson, Lee Fargo, N. D.
Chunn, S. S. Pipestone
Clarett, O. T. Rochester
Clark, C. L. Duluth
Clark, Edward C. Rochester
Clark, Elizabeth A. Duluth
Clark, H. B. Saint Cloud
Clark, H. B., Jr. Minneapolis
Clark, T. T. Duluth
Clark, L. Wm. Spring Valley
Clark, P. I. Rochester
Clarke, E. K. Minneapolis
Clav, L. B. Minneapolis

Claydon, H. F. Red Wing
Cleaves, Wm. D. Sauk Centre
† Clement, J. B. Lester Prairie
Clifford, G. W. Alexandria
Clifton, Theodore Chatfield
Cloisut, F. C. Aldin
† Clothier, E. F. Saint Paul
Cochrane, B. F. Saint Paul
Cochrane, R. F. Minneapolis
Coddon, W. D. Saint Paul
Coe, John I. Minneapolis
Cofe, Vernon Rochester
Cohen, B. A. Minneapolis
Cohen, E. B. Minneapolis
Cohen, Ellis M. Saint Paul
Cohen, M. N. Saint Paul
Cohen, S. S. Oak Terrace
Colby, M. V., Jr. Rochester
Colby, W. L. Saint Paul
Cole, W. H. Saint Paul
Coleman, J. B. Saint Paul
Coll, J. J. Duluth
† Collie, H. G. St. Petersburg, Fla.
† Collins, A. N. Moose Lake
Collins, J. S. Wabasha
Combacker, L. C. Fergus Falls
Comfort, M. W. Rochester
Condit, Wm. H. Minneapolis
Conley, F. W. Duluth
Conley, R. H. Mankato
Connolly, C. J. Saint Paul
Connor, C. E. Saint Paul
Cook, C. K. Saint Paul
Cook, J. M. Staples
Cooley, J. C. Wyoming
† Cooley, C. H. Cass Lake
Cooney, J. F. Rochester
Cooper, C. C. Saint Paul
Cooper, J. P. Excelsior
Cooper, M. D. Winnebago
Cooper, Robt. R. Minneapolis
Cooper, Talbert Rochester
Cope, H. B. Virginia
Corbin, K. B. Rochester
Cornica, A. D. Minneapolis
Correa, D. H. Minneapolis
† Corrigan, J. E. Spooner
Cosgriff, J. A. Olivia
Cosgriff, J. A., Jr. Olivia
Costello, Addis Rochester
Coulter, H. E. Madelia
Counsellor, Virgil Rochester
Countryman, R. S. Saint Paul
Courtin, R. F. Worcester, Mass.
Covell, W. W. Saint Peter
Coventry, M. B. Rochester
† Coventry, Wm. A. Duluth
Coventry, Wm. D. Duluth
Covey, K. W. Mahanomen
Cowan, D. W. Minneapolis
Cowley, H. S. Kansas City
Craig, C. C. International Falls
Craig, D. M. Saint Paul
Craig, M. Elizabeth Minneapolis
Craig, W. McK. Rochester
Cramer, R. R. Minneapolis
Cranston, R. W. Minneapolis
Creedy, C. D. Minneapolis
Creighton, R. H. Minneapolis
† Crenshaw, J. L. Sanford, Fla.
Critchfield, L. R. Saint Paul
Crownell, B. J. Austin
Crow, E. R. Hot Springs, S. D.
Crowley, I. H. Saint Paul
† Crudo, V. D. Saint Paul
Crumm, J. W. Saint Paul
† Crumley, J. J. Rochester
Crumpacker, E. L. Roanoke, Va.
Culligan, I. M. Saint Paul
Culligan, L. C. Minneapolis
Culp, O. S. Rochester
Culver, L. G. Saint Paul
Cundy, D. T. Minneapolis
Curtiss, R. K. Los Angeles
Cushing, R. L. Brainerd
† Cutts, George Minneapolis
Dady, E. E. Minneapolis
Daehlin, Rolf Fergus Falls
Dahl, E. O. Minneapolis
† Dahl, G. A. Minneapolis
Dahl, James C. Minneapolis
Dahl, J. A. Minneapolis
Dahle, M. B. Olivia
Dahlin, D. C. Rochester
Dahlstet, J. P. Mankato
† Daignault, Oscar Benson
Dale, L. N. Red Lake Falls
Daniel, D. H. Minneapolis
Danielson, Lennox Minneapolis
Dargav, C. P. Mankato
Daugherty, G. W. Rochester
Davis, A. C. Rochester
Davis, Edw. V. Saint Paul
Davis, Geo. D. Rochester

ALPHABETICAL ROSTER

† Davis, Harry L. Rochester
 Davis J. C. Minneapolis
 Davis, L. T. Wadena
 Davis, L. F. Wadena
 † Davis, N. B. Rochester
 Davis, R. D. Waseca
 † Davis, R. E. Geneva, N. Y.
 Davis, T. L. Wadena
 Davis, Wm. L. Mound
 Dawson, J. R. Saint Paul
 Deering, Wm. H., Jr. Rochester
 † DeBoer, Hermanus Edgerton
 Decker, C. H. Saint Paul
 DeKruif, H. Fergus Falls
 Delmore, J. L. Roseau
 Delmore, J. L., Jr. Roseau
 Delmore, R. J. Roseau
 Del Plaine, C. W. Minneapolis
 Demo, R. A. Albert Lea
 Denman, A. V. Mankato
 Denton, C. Rochester
 Derauf, B. I. Saint Paul
 Deters, D. C. Saint Paul
 Detjen, E. D. Big Fork
 Deveraux, T. J. Wayzata
 Devine, K. D. Rochester
 DeWeerd, J. H. Rochester
 Deweese, W. J. Bemidji
 Dewey, D. H. Owatonna
 Dickman, Roy W. Minneapolis
 Dickson, F. H., Jr. Proctor
 Dickson, T. H. Saint Paul
 Diehl, H. S. Minneapolis
 Diessner, A. W. Redwood Falls
 Diessner, G. R. Rochester
 Diessner, H. D. Minneapolis
 † Dillard P. G., Jr. Camp Carson, Colo.
 Dille, D. E. Litchfield
 Dittrich, R. J. Duluth
 Dixon, Claude F. Rochester
 † Dixon, J. C. Rochester
 Dobson, J. C. Rochester
 Dockerty, M. B. Rochester
 Dodds, Wm. C. Detroit Lakes
 Dodge, Henry W., Jr. Rochester
 Doerr, John C. Rochester
 † Doherty, E. M. New Prague
 Doman, V. Wm. Lakefield
 Doms, Vernon A. Elbow Lake
 Donaldson, C. S. Saint Cloud
 Donatelle, E. P. Minneapolis
 † Donin, J. F. Rochester
 Donoghue, F. E. Rochester
 Donohue, P. F. Saint Paul
 Donovan, D. L. Albert Lea
 Dordal, John Sacred Heart
 Dorge, R. I. Minneapolis
 Dornberger, G. R. Ft. Lauderdale, Fla.
 Dornblaser, H. B. Minneapolis
 Dorsey, G. C. Minneapolis
 Douglass, B. E. Rochester
 † Dovenmuehle, R. H. El Paso, Tex.
 Doney, G. L. Minneapolis
 Dowie, G. C. Duluth
 Dowie, James R. Rochester
 Dowie, L. O. Minneapolis
 Drake, C. B. Saint Paul
 † Drake, H. P. Minneapolis
 † Dredge, T. E. Minneapolis
 Drexler, Geo. W. Blue Earth
 Drill, Herman E. Honkins
 † Drips Della G. Rochester
 Drv. Thos. J. Rochester
 Dubbe, F. H. New Ulm
 DuBois, I. F., Jr. Sauk Centre
 Duff, E. R. Minneapolis
 Duncan, D. K. Rochester
 Duncan, T. W. Moorhead
 † Duneav, N. S. Northfield
 Dunlap, E. H. Minneapolis
 Dunlap, R. W. Rochester
 † Dunn, Jack, Jr. Rochester
 Dunn, James N. Saint Paul
 Dumont, I. A. Excelsior
 Durvae, W. M. Minneapolis
 DuShane, James W. Rochester
 Dutton, C. E. Minneapolis
 Dvorak, B. A. Minneapolis
 Dwan, P. F. Minneapolis
 Dworsky, S. D. Minneapolis
 † Dwyer, John J. Duluth
 † Dukstra, P. C. Rochester
 Dysterheft, A. F. Gaylord
 Earl, Geo. A. Saint Paul
 Earl, John R. Saint Paul
 Eaton, L. M. Rochester
 Eberly, T. S. Benson
 † Eberlin, Edw. A. Glenwood
 Eckdale, J. E. Marshall

Eckman, P. F. Duluth
 Eckman, R. J. Duluth
 Edlund, Gustaf Saint Paul
 Edwards, J. E. Rochester
 Edwards, J. W. Saint Paul
 Edwards, L. G. Saint Paul
 Edwards, T. J. Saint Paul
 Egge, S. G. Albert Lea
 Eginton, C. T. Saint Paul
 Ehrenberg, C. J. Minneapolis
 Ehrlich, S. P. Minneapolis
 Eich, M. A. Minneapolis
 Eichhorn, E. P. Minneapolis
 Eide, O. A. Hancock
 Eiler, John Park Rapids
 Eisenstadt, D. H. Minneapolis
 Eisenstadt, Wm. S. Minneapolis
 Eitel, Geo. D. Minneapolis
 † Ekbladt, J. W. Duluth
 Eklund, C. D. Duluth
 Ekstrand, L. M. Wabasha
 Elias, Frank J. Duluth
 Elkins, Earl C. Rochester
 Ellertson, L. M. Albert Lea
 Ellinger, A. Willmar
 Ellis, Earl Wm. Elgin
 Ellis, F. H. Rochester
 Ellison, D. E. Minneapolis
 Ellison, Ellis Minneapolis
 Ellison, F. E. Monticello
 Flsey, Edw. M. Glenwood
 † Elsey, James R. Glenwood
 Fly, O. Saint Paul
 Emanuel, K. Wm. Duluth
 Emerson, E. C. Saint Paul
 Emerson, E. E. Osakis
 Emmett, John H. Rochester
 Emmons, R. W. Saint Paul
 Emond, A. I. Farmington
 Emond, J. S. Farmington
 Endress, E. K. Saint Paul
 Engberg, E. J. Faribault
 Engelhart, P. C. Minneapolis
 Englund, E. E. Minneapolis
 Engstrand, O. J. Minneapolis
 Engstrom, G. F. Belgrade
 Engstrom, Robert Mankato
 Enroth, O. E. Saint Paul
 Ennard, R. M. Cloquet
 Ennerson, D. P. Rochester
 Erdel, O. A. Albert Lea
 Erich, J. B. Rochester
 Erickson, A. O. Long Prairie
 Erickson, C. O. Minneapolis
 Erickson, D. I. Rochester
 Erickson, Eskil Halstad
 Erickson, G. P. Hibbing
 Erickson, L. F. Minneapolis
 Erickson, Myron Minneapolis
 Erickson, R. F. Minneapolis
 Erickson, R. M. Wayzata
 Frison, Swan LeSueur
 † Ernest, G. C. H. St. Petersburg, Fla.
 Frisfeld, M. P. Saint Paul
 Friskie, G. M. Grand Rapids
 Ertel, E. I. Ellendale
 † Fshelbv, F. C. Saint Paul
 Estes, J. E. Rochester
 † Estrem, C. O. Fergus Falls
 Estrem, R. D. Fergus Falls
 Estrem, R. L. Fergus Falls
 Estrem, T. A. Hibbing
 † Eusterman, G. J. Rochester
 Eusterman, J. J. Mankato
 Evans, Eugene G., Jr. Rochester
 Evans, E. T. Minneapolis
 Evans, Leslie Sauk Rapids
 † Evans, R. D. Minneapolis
 † Everts, A. B. Rochester
 Evensta John B. Grand Rapids
 Evert, J. A., Jr. Saint Paul
 Faber, J. E. Rochester
 † Fahey, Edw. W. Saint Paul
 Farkas, George Minneapolis
 Fandler, W. A. Minneapolis
 Farkas, I. V. Saint Paul
 † Farrish, R. C. Sherburn
 Faulconer, Albert, Jr. Rochester
 Faulkner, J. W. Rochester
 Fawcett, A. M. Renville
 Fawcett, K. R. Duluth
 Fee, John G. Saint Paul
 Feeney, J. M. Minneapolis
 Feeney, Michael J. Minneapolis
 Feferman, Martin E. Minneapolis
 Feigal, D. W. Wayzata
 Feigal, Wm. M. Thief River Falls
 Feinberg, Philip Minneapolis
 Feinstein, J. Y. Minneapolis
 Felder, Davitt A. Saint Paul
 Feldmann, Floyd New York, N. Y.
 Felton, A. J. Saint Paul
 Fellows, M. F. Duluth

Fenger, E. P. K. Oak Terrace
 Ferguson, James Rochester
 Ferguson, J. C. Saint Paul
 Ferguson, Wm. C. Walnut Grove
 Ferrell, C. R. Grand Rapids
 Ferris, D. O. Rochester
 Fesenmaier, O. B. New Ulm
 Fesler, H. H. Saint Paul
 Feuling, J. C. Duluth
 Fidelman, N. E. Minneapolis
 Field, A. H. Farmington
 Figi, Frederick A. Rochester
 Fingerman, D. L. Minneapolis
 Fink, D. L. Saint Paul
 Fink, Leo M. Minneapolis
 Fink, W. H. Minneapolis
 Finkelnburg, W. O. Winona
 Fisch, H. M. Austin
 Fischer, J. R. Blooming Prairie
 Fischer, M. McC. Duluth
 Fisher, D. W. Saint Paul
 Fisher, Isadore I. Minneapolis
 Fiskett, Henry Duluth
 † Fitzgerald, D. F. Wayzata
 † Fitzgerald, E. T. Kialto, Calif.
 Fitzsimons, Wm. E. Brainerd
 Fjelstad, C. A. Minneapolis
 Flagg, G. B. Minneapolis
 Flanagan, H. F. Saint Paul
 Flanagan, L. G. Austin
 Flancher, L. H. Crookston
 Flannery, H. F. Saint Paul
 † Fleming, A. H. Duluth
 † Fleming, J. C. Clearwater, Fla.
 Fleming, D. S. Honkins
 Fleming, T. N. Saint Cloud
 Flesche, B. A. Lake City
 Flehr, R. R. Minneapolis
 Flink, E. B. Minneapolis
 † Flinn, T. B. Redwood Falls
 † Floersch, A. J. Seattle, Wash.
 Flom, M. G. Zumbota
 Flom, Robert S. Echo
 Florine, Martin Janesville
 Fly, O. A., Jr. Rochester
 Flynn, B. F. Hibbing
 Flynn, L. L., Jr. Saint Paul
 † Fogarty, C. Wm. Saint Paul
 Fogarty, C. Wm., Jr. Saint Paul
 Fogelberg, E. J. Saint Paul
 Foker, L. E. Minneapolis
 Foley, F. E. B. Saint Paul
 Folken, F. G. Albert Lea
 Folsom, Louis B. Minneapolis
 Ford, B. C. Marshall
 Ford, Wm. H. Minneapolis
 Forney, W. D. Rochester
 Forsythe, J. R. Saint Paul
 Fortier, G. M. A. Little Falls
 Forbender, Herman Hastings
 Foss, E. L. Minneapolis
 Foster, O. W. Minneapolis
 Fowler, L. H. Minneapolis
 Fox, I. R. Minneapolis
 Franchere, F. Wm. Lake Crystal
 Francis, D. W. Morristown
 Frane, D. B. Minneapolis
 Franklin, G. W. Northome
 † Fear, Rosemary Minneapolis
 Fredericks, Geo. W. Minneapolis
 Fredericks, Alice C. Willmar
 † Fredericks, M. G. Duluth
 Freedman, M. A. Rochester
 Freedman, R. H. Rochester
 Freeman, C. D. Tr. Saint Paul
 Freeman, Craig Minneapolis
 Freeman, D. W. Minneapolis
 † Freeman, G. I. Saint Paul
 Freeman, J. G. Fergus Falls
 † Freeman, J. P. Glenville
 Friedman, L. L. Saint Paul
 Freligh, W. P. Albert Lea
 French, L. A. Minneapolis
 † Freymann, John G. Boston, Mass.
 Friberg, Jos. Minneapolis
 Fricke, R. E. Rochester
 Fried, L. A. Minneapolis
 Friedell, Aaron Minneapolis
 Friedell, George Ivanhoe
 Friedman, H. S. Minneapolis
 Friedman, Jack Minneapolis
 Friend, C. A. Sauk Rapids
 † Friesleben, Wm. Willmar
 Fritche, Albert New Ulm
 Fritsche, C. J. New Ulm
 Fritsche, Theo. R. New Ulm
 Fritz, W. L. Saint Paul
 Froats, C. W. Saint Paul
 † Frost, E. H. Willmar
 Frost, J. B. Minneapolis
 Frost, R. H. Oak Terrace
 Frylund, C. B. Lyle
 Frykman, H. M. Minneapolis

ALPHABETICAL ROSTER

Fugina, Geo. R. Mankato
Fuller, Alice H. Minneapolis
Fuller, B. F. Saint Paul
Fuller, Josiah. Duluth
Funk, V. K. Oak Terrace
Furnell, D. Q. Minneapolis
Futch, William D. Rochester

Gaard, R. C. Minneapolis
Gaida, J. B. Saint Cloud
† Gaines, E. C. Buffalo Lake
† Gallagher, B. J. Waseca
† Gallagher, W. B. Vienna, Austria
Gallet, L. E. Minneapolis
Galligan, John J. Saint Paul
† Galligan, Margaret M. Minneapolis
Galloway, J. B. Minneapolis
† Gambill, C. M. Rochester
Gammell, J. H. Minneapolis
Garbrecht, A. Wm. Saint Paul
Gardner, V. H. Fairmont
Gardner, W. P. Saint Paul
Garlock, A. V. Bemidji
Garlock, D. H. Bemidji
† Garlock, G. Bemidji
† Garrett, Chas. Jr. Rochester
Garrow, D. M. Saint Paul
Garske, G. L. Minneapolis
Garten, J. L. Minneapolis
Gastineau, C. F. Rochester
† Gatchell, Frank G. Montgomery, Ala.
† Gaunt, W. D. Rochester
Gaviser, David. Minneapolis
Gehlen, J. N. Saint Paul
Gerb, Marvin J. Moorhead
Geiser, Peter M. Alexandria
Geraci, J. E. Rochester
Gericke, J. T., Jr. Glenwood
Geurs, B. R. Mankato
Ghent, C. H. Saint Paul
Ghormley, R. K. Rochester
Ghostley, Mary C. Bemidji
Gibb, R. P. Bellingham, Wash.
Gibbs, E. C. Saint Paul
Gibson, R. W. C. Minneapolis
Gibson, R. G. Rochester
Gibbenhain, J. N. Minneapolis
Giere, J. C. Minneapolis
Giere, R. W. Minneapolis
Giere, S. W. Benson
Giesen, A. F. Starbuck
† Giffin, H. Z. Rochester
Gifford, R. W., Jr. Rochester
Gilbert, M. G. Minneapolis
Gilkey, S. E. Saint Paul
Gillespie, D. Saint Paul
Gillespie, M. G. Saint Paul
† Gilley, E. Wayne Rochester
Gilman, L. C. Willmar
† Gilmore, Rowland. Crookston
Gingold, B. A. Minneapolis
† Ginsberg, James P. Rochester
Ginsberg, R. L. Rochester
† Giroux, A. A. Mankato
Girvin, R. B. Minneapolis
Gjerde, Wm. P. Lake City
Glabe, R. A. C. Plainview
† Glaeser, John H. Minneapolis
Gleason, W. A. Saint Paul
Goblirsch, A. P. Sleepy Eye
Goehrs, G. H. Saint Cloud
† Goehrs, H. Wm. Saint Cloud
Goldberg, I. M. Minneapolis
Goldish, D. R. Duluth
Goldman, T. I. Minneapolis
Goldner, M. Z. Minneapolis
Goldsmith, J. W. Saint Paul
Goldstein, N. W. Rochester
† Goltz, E. V. Saint Paul
† Goltz, N. F. Saint Paul
† Goltz, Robert. Minneapolis
Good, C. A., Jr. Rochester
Good, H. D. Minneapolis
Goodlad, J. H. Rochester
Goodman, Chas. Virginia
Gordon, P. E. Minneapolis
Gordon, S. S. St. Louis Park
Goss, H. C. Glencoe
Goss, Martha D. Duluth
Gowan, L. R. Duluth
† Graham, A. W. Chisholm
† Graham, G. G. San Diego
Grahek, J. P. Ely
† Grais, M. L. Minneapolis
Grant, H. W. Saint Paul
Grant, J. C. Sauk Centre
Grant, Suzanne. Minneapolis
Gratzek, F. R. E. Minneapolis
Gratzek, Thos. Saint Paul
Gru, R. K. Saint Paul

Graves, R. B. Red Wing
† Gray, F. D. Marshall
Gray, H. K. Rochester
Gray, R. C. Minneapolis
Green, R. A. Minneapolis
† Green, Robert C. Jr. Rochester
Green, Wilson, Jr. Rochester
Greenberg, A. J. Minneapolis
Greene, D. E. Thief River Falls
Greene, L. F. Rochester
Greenfield, Irving. Minneapolis
Greenfield, Wm. T. Cokato
† Greisheimer, E. M. Philadelphia, Pa.
Gridley, John W. Saint Peter
Griebe, G. L. Brownston
† Griffin, G. D. Jr. Rochester
Griffin, John W., Jr. Bemidji
Griffin, R. P. Benson
Grimes, B. P. Saint Peter
Grimes, Marian. Minneapolis
Grindlay, J. H. Rochester
Grinley, A. V. Grand Rapids
Grise, Wm. B. Austin
Gronvall, P. R. Minneapolis
Groschuff, Theo. P. Bemidji
Gross, F. N. Clarissa
Gross, J. B. Rochester
Grotting, J. K. Minneapolis
† Gruenhagen, A. P. Saint Paul
Grundset, O. J. Montrose
Guilbert, G. D. Waukesha, Wis.
Guilfoile, P. J. Delano
Gulley, J. L. Rochester
† Gullickson, Glenn, Jr. Minneapolis
† Gullickson, Andrew. Longmont, Colo.
† Gully, R. J. Cambridge
Gunlaugson, F. G. Minneapolis
Gushurst, E. G. Minneapolis
Gustafson, M. B. Rochester
Gustason, H. T. Minneapolis
Guy, Jack A. New London
† Gwinn, John L. Rochester

Haavik, I. E. Duluth
Habein, H. C. Rochester
Habein, Harold, Jr. Rochester
Haberer, Helen R. Minneapolis
Haes, Julius E. Mankato
Hagedorn, A. B. Rochester
Hagen, Kristofer. Cokato
Hagen, O. J. Moorhead
† Hagen, P. S. Saint Paul
Hagen, W. S. Minneapolis
† Haegard, G. D. Minneapolis
Haigler, Frank H. Jr. Rochester
† Haines, J. H. Stillwater
† Haines, S. F. Rochester
† Halbert, J. J. Duluth
Halenbeck, P. L. Saint Cloud
Hall, Barnard. Saint Paul
Hall, H. B. Minneapolis
Hall, W. H. Minneapolis
Hall, Wm. E. Maple Lake
Hallberg, C. A. Minneapolis
Hallberg, O. E. Rochester
† Hallenbeck, D. F. Rochester
† Hallenbeck, G. A. Rochester
† Halliday, P. V. Minneapolis
Hallin, R. P. Worthington
Halloran, W. H. Jackson
Halme, W. B. Hibbing
Halper, Bernard. Hibbing
Halpern, D. J. Brewster
Halpin, J. E. Rush City
Halvorsen, D. K. Owatonna
Halvorsen, I. W. Goodhue
Hamlon, John S. Fergus Falls
Hammar, L. M. Mankato
Hammes, E. M. Saint Paul
Hammes, E. M., Jr. Saint Paul
Hammon, John S. Fergus Falls
† Hammond, I. F. Saint Paul
† Haney, C. L. Duluth
Hankerson, R. G. Minnesota Lake
Hanlon, D. G. Rochester
Hannah, H. B. Minneapolis
Hanover, R. D. International Falls
Hansen, C. O. Minneapolis
Hansen, E. W. Minneapolis
Hansen, O. S. Minneapolis
† Hansen, R. E. Marysville, Calif.
Hansen, R. M. Minneapolis
Hansen, Theo. M. Albert Lea
† Hanson, A. M. Faribault
Hanson, E. O. Carlton
Hanson, E. C. New York Mills
Hanson, H. I. Minneapolis
Hanson, H. B. Saint Paul
Hanson, H. V. Minneapolis
Hanson, J. W. Northfield
Hanson, LeRoy W. Pelican Rapids
Hanson, Lewis. Frost
Hanson, M. B. Minneapolis

Hanson, M. C. Minneapolis
Hanson, N. O. Rochester
Hanson, S. M. Sparta, Wis.
Hanson, Wm. A. H. Minneapolis
Happe, L. J. Minneapolis
Hartbaugh, J. T. Saint Paul
Harmon, G. E. Saint Paul
Harrington, S. W. Rochester
Harris, C. N. Hibbing
† Harris, Evelyn S. Fergus Falls
Harris, L. D. Minneapolis
Harris, L. E. Rochester
Harrison, P. W. Worthington
Hart, Wm. E. Monticello
Hartiel, H. A. Montevideo
Hartfield, Wm. F. Saint Paul
Hartig, H. A. Minneapolis
Hartig, Marjorie. Saint Paul
Hartjen, J. K. Bemidji
Hartley, E. C. Saint Paul
Hartman, Evelyn. Minneapolis
Hartnagel, G. F. Red Wing
Hartung, E. H. Claremont
Hartwich, R. F. Winona
Hass, E. M. Minneapolis
† Hassett, R. G. Mankato
Hastings, D. R. Minneapolis
Hastings, D. W. Minneapolis
Hatch, W. E. Duluth
Hauge, E. T. Minneapolis
† Hauge, M. I. Clarkfield
† Hauge, G. W. Pensacola, Fla.
Haugen, J. A. Minneapolis
Hauser, G. W. Minneapolis
Hauser, V. P. Saint Paul
Havel, R. J. Minneapolis
Haven, W. K. Minneapolis
Havens, F. Z. Rochester
Havens, Fred Z., Jr. Riverside, Calif.
† Havens, J. G. W. Austin
Hawkinson, R. P. Minneapolis
Hawley, II, G. M. B. Red Wing
Hayes, A. F. Saint Paul
Hayes, J. M. Minneapolis
Hayes, M. F. Nashua
Hayles, Alvin B. Rochester
Hays, A. T. Minneapolis
Head, D. P. Minneapolis
Healy, R. T. Pierz
Hebbel, Robt. Minneapolis
Hebeisen, M. B. Chaska
Heck, F. J. Rochester
Heck, W. W. Saint Paul
Hedberg, G. A. Nopeming
Hedemerk, H. H. Ortonville
Hedemerk, A. A. Ortonville
Hedenstrom, P. G. Saint Paul
Hedenstrom, P. C. Marshall
Hedin, R. F. Red Wing
† Hegge, O. H. Austin
† Hegge, R. S. Austin
Heiam, Wm. C. Cook
Heiberg, E. A. Fergus Falls
Heiberg, O. M. Worthington
† Heilig, William R. Saint Paul
† Heilman, D. M. H. Rochester
Heilman, F. R. Rochester
Heimark, John J. Rochester
Heimark, J. J. Fairmont
† Heine, Geo. W. Little Falls
Heinz, Ivy B. Shakopee
Heinz, L. H. Shakopee
Heise, Carl v.R. Winona
Heise, Paul. Winona
† Heise, Wm. F. C. Winona
† Heiser, T. J. Minneapolis
Helden, R. A. Rochester
Helferty, J. K. Boise, Idaho
† Helland, G. M. Spring Grove
† Helland, J. W. Spring Grove
Helle, Ben I. Minneapolis
† Helmholtz, H. F. Rochester
Helseth, H. K. Pelican Rapids
† Hempstead, B. E. Rochester
Henderson, A. J. G. North St. Paul
Henderson, E. D. Rochester
Henderson, J. W. Rochester
Henderson, Lowell. Rochester
† Henderson, M. S. Rochester
† Hendricks, Everett D. Rochester
Hendricks, E. J. Saint Paul
† Hendrickson, J. F. Minneapolis
Hengstler, Wm. H. Saint Paul
Henney, Wm. H. McIntosh
Henrikson, E. C. Minneapolis
† Henry, C. E. Kirksville, Mo.
† Henry, H. W. Hinckley
Henry, J. E. Milaca
Henry, M. O. Minneapolis
Henry, M. R. Saint Peter
Hensel, C. N. Saint Paul

ALPHABETICAL ROSTER

† Hepper, Norman G. Rochester
 Herbert, C. M., Jr. Rochester
 Herbert, W. L. Minneapolis
 Herbst, R. F. Willmar
 Herman, S. M. Saint Paul
 Hermann, H. W. Minneapolis
 Hermanson, P. E. Hendricks
 Heron, R. C. Saint Paul
 Herrell, W. E. Rochester
 Herrmann, E. T. Saint Paul
 Hertel, G. E. Austin
 Hertz, M. J. Saint Paul
 Hesdorffer, M. B. Martinville
 Hesla, Inman A. Austin
 † Hewitt, Edith S. Rochester
 † Hewitt, R. M. Rochester
 † Heyerdale, O. C. Rochester
 † Higgins, J. H. Minneapolis
 Higgs, W. W. Park Rapids
 Hightower, N. C., Jr. Temple, Tex.
 Hildebrand, J. E. Bemidji
 Hilding, A. C. Duluth
 † Hilger, A. Wm. Saint Paul
 Hilger, J. A. Saint Paul
 Hilger, L. D. Saint Paul
 Hilker, M. D. Saint Paul
 Hill, Earl Minneapolis
 Hill, Elmer M. Minneapolis
 Hill, F. E. Duluth
 † Hill, J. R. Rochester
 † Hillis, S. J. East Bradenton, Fla.
 Hinkley, E. G. Minneapolis
 Hinderaker, H. P. Bird Island
 Hines, E. A., Jr. Rochester
 Hiniker, L. P. Saint Paul
 Hiniker, Peter LeSueur
 Hinz, W. E. Willmar
 Hirschboeck, F. J. Duluth
 Hirschfeld, F. R. Minneapolis
 † Hitchcock, C. R. Minneapolis
 Hochfelter, J. J. Saint Paul
 Hodapp, R. C. Willmar
 Hodgson, Jane E. Saint Paul
 Hodgson, J. R. Rochester
 Hoehn, David Holdingford
 Hoepfer, P. G. Mankato
 Hoff, H. O. Duluth
 Hoffbauer, F. W. Minneapolis
 Hoffert, H. E. Minneapolis
 † Hoffman, M. S. Rochester
 Hoffman, R. A. Minneapolis
 Hoffman, W. L. Minneapolis
 Hofmann, G. N. Willmar
 † Hoganson, D. E. Bemidji
 † Hoidal, Andrew Tracy
 Holcomb, Joel T. Marine-On-The-St. Croix
 † Holcomb, O. W. Saint Paul
 Holland, C. R. Rochester
 † Hollands, W. H. Fisher
 Hollenhorst, R. W. Rochester
 Hollinshead, W. H. Saint Paul
 Holm, D. H. Benson
 Holm, H. H. Glencoe
 † Holm, P. F. Sarasota, Fla.
 Holman, C. B. Rochester
 Holmberg, C. J. Minneapolis
 Holmberg, Leroy J. Canby
 Holmen, R. W. Saint Paul
 Holmes, A. E. Rush City
 Holmstrom, C. H. Warren
 † Holt, A. H. Ft. Knox, Ky.
 † Holt, Prescott B. Saint Paul
 † Holzapfel, F. C. Minneapolis
 Hom, L. Y. W. Battle Lake
 Hooper, Worth Hastings
 † Hopkins, G. W. Saint Paul
 † Horns, H. L. Minneapolis
 Horns, R. C. Minneapolis
 Horton, B. T. Rochester
 Hottinger, R. C. Janesville
 † Houkom, Bjarne Luskoto T. T., East Africa
 Houkom, S. S. Duluth
 Houle, R. J. New Brighton
 † House, Z. E. Burbank, Calif.
 Houston, D. M. Park Rapids
 Howde, Rolf Winthrop
 Hovland, M. L. Minneapolis
 Howard, M. I. Mankato
 Howard, M. A. Saint Paul
 Howard, R. B. Minneapolis
 Howard, S. E. Minneapolis
 Howard, W. S. Saint Paul
 Howe, N. W. Saint Paul
 Howell, Carter W. Minneapolis
 Howell, L. P. Rochester
 Hoyer, L. J. Windom
 Hruza, Wm. I. Madelia
 Hubbard, O. E. Brainerd
 Hubin, E. G. Sandstone
 Hudce, E. R. Echo

Hudspeth, Wm. T. Madison
 Huenekens, E. J. Minneapolis
 † Huffington, H. L. Mankato
 † Huffington, Herb L. Waterville
 Huizenga, K. A. Rochester
 Hullsieck, H. E. Saint Paul
 † Hullsieck, R. B. Minneapolis
 † Hultgen, Wm. J. Saint Paul
 † Hultkrans, J. C. Minneapolis
 Hultkrans, E. E. Minneapolis
 Humphrey, E. W. Moorhead
 Humphrey, E. W., Jr. Moorhead
 Humphrey, W. R. Stillwater
 Hunt, A. B. Rochester
 † Hunt, A. F. Alhambra, Calif.
 Hunt, R. C. Fairmont
 Hunt, William Rochester
 Hunter, J. S. Rochester
 Hunter, M. H. Farmington
 Hunter, R. C. Dayton, Ohio
 † Hurd, Annah Minneapolis
 Hurwitz, M. M. Saint Paul
 † Hutchinson, C. J. So. Boston, Mass.
 Hutchinson, Henry Moose Lake
 † Huxley, F. R. Faribault
 Hynes, Charles Minneapolis
 Hynes, J. E. Minneapolis
 † Ide, Arthur W. Saint Paul
 Ide, Arthur W., Jr. Minneapolis
 Idstrom, L. G. Minneapolis
 Ikeda, Kano Saint Paul
 Indihar, John E., Jr. Virginia
 Ingalls, E. G., Jr. Minneapolis
 Ingebrigtsen, E. K. G. Moorhead
 Ingerson, C. A. Saint Paul
 Inglis, Wm. Redwood Falls
 Irwin, Homer R. Hibbing
 † Irvine, H. G. Minneapolis
 Iversen, R. M. Minneapolis
 Ivins, John C. Rochester
 Ivy, John H. Rochester
 † Jackman, R. J. Rochester
 † Jackson, Richard L. Rochester
 Jacobs, D. L. Willmar
 † Jacobs, J. C. Willmar
 Jacobson, Clarence Chisholm
 Jacobson, C. W. Breckenridge
 Jacobson, F. C. Duluth
 Jacobson, W. E. St. Louis Park
 James, Elery Saint Paul
 † James, J. W. Saint Paul
 † Jampolis, R. W. San Francisco, Cal.
 Janecy, A. G. Baudette
 Janes, J. M. Rochester
 Janssen, M. E. Saint Paul
 Jarvis, M. A. Saint Paul
 Jay, A. R. Minneapolis
 Jensen, A. R. New York
 Jensen, A. M. Brownston
 Jensen, H. C. Minneapolis
 Jensen, M. J. Minneapolis
 Jensen, N. K. Minneapolis
 Jensen, R. A. Minneapolis
 Jensen, T. J. Duluth
 Jensen, J. E. Stillwater
 † Jensen, R. New York
 Jerome, Bourne Minneapolis
 Jerome, E. E. Minneapolis
 Jeronimus, H. J. Duluth
 Jesion, J. W. Saint Paul
 Jessico, C. M. Duluth
 Jeub, Robert P. Minneapolis
 Joffe, H. H. Virginia
 Johanson, W. G. Saint Paul
 Johnson, Adelaide McF. Rochester
 Johnson, Aldridge F. Isle, Minn.
 Johnson, Arthur B. Minneapolis
 Johnson, August E. Minneapolis
 Johnson, C. E. Saint Paul
 † Johnson, Carl E. Saint Paul
 Johnson, Carl Eric Rochester
 Johnson, C. M. Dawson
 † Johnson, Charles M., Jr. Rochester
 Johnson, C. Percy Tyler
 Johnson, D. L. Little Falls
 Johnson, Edward A. Virginia
 Johnson, E. W. Bemidji
 † Johnson, Einer W., Jr. Rochester
 † Johnson, Edward A. Virginia
 Johnson, Emil W. Minneapolis
 † Johnson, H. C. San Diego, Calif.
 Johnson, Harry A. Minneapolis
 Johnson, Herbert Saint Paul
 Johnson, Hobart C. North Mankato
 Johnson, J. A. Minneapolis
 Johnson, J. W. Minneapolis
 Johnson, Julius Minneapolis
 Johnson, K. E. Duluth
 Johnson, M. R. Minneapolis

Johnson, Norman P. Minneapolis
 Johnson, Norton T. Minneapolis
 Johnson, Olga H. Moorhead
 Johnson, Orville H. Norfolk, Neb.
 Johnson, Ralph B. Lanesboro
 Johnson, Ray G. Stillwater
 Johnson, Reinald G. Minneapolis
 Johnson, Reuben A. Minneapolis
 Johnson, Robert E. Minneapolis
 Johnson, Rogers Wayzata
 Johnson, Rudolph E. Ah Gwah-Ching
 Johnson, R. J. Saint Paul
 Johnson, V. M. Dawson
 Johnson, Wm. E. Morgan
 Johnson, Y. T. Minneapolis
 Johnsrud, L. W. Hibbing
 Johnston, Edward V. Rochester
 Johnston, L. F. Winona
 † Johnston, R. O. Hibbing
 Jolin, F. M. Bovey
 Jones, Alvah W. Red Wing
 Jones, E. Mendelssohn Saint Paul
 Jones, David G. Hopkins
 † Jones, G. W. Ft. Leavenworth, Kan.
 † Jones, H. W., Jr. Minneapolis
 Jones, O. H. Mankato
 Jones, Richard Minneapolis
 Jones, Richard F. Rochester
 Jones, R. H. Minneapolis
 Jones, R. N. Saint Cloud
 Jones, Robcliff V. Rochester
 Jones, W. R. Minneapolis
 † Jordan, Geo. I., Jr. Rochester
 † Jordan, Kathleen B. S. Granite Falls
 Jordan, L. S. Granite Falls
 † Jordan, Stanley Rochester
 Josewich, Alex. Minneapolis
 Joseski, R. J. Stillwater
 Josselson, A. J. Alhambra, Calif.
 Joyce, G. L. Rochester
 Judd, E. S., Jr. Rochester
 Judd, Walter H. Washington, D. C.
 Juergens, H. M. Belle Plaine
 Juergens, John L. Belle Plaine
 Juergens, M. F. Stillwater
 Juers, E. H. Red Wing
 Juhl, John H. Minneapolis
 † Juliar, R. O. Saint Clair
 Jurdy, M. J. Minneapolis
 Kaasa, L. J. Saint Peter
 Kabrick, O. A. Saint Peter
 Kaiser, Milton L. New Ulm
 Kalin, O. T. Minneapolis
 Kallestad, L. L. Wayzata
 Kamman, G. R. Saint Paul
 Kamp, Byron A. Albert Lea
 † Kanne, E. R. Brainerd
 Kantar, Bruce L. Minneapolis
 Kaplan, D. H. Saint Paul
 Kaplan, Harold A. Minneapolis
 Kaplan, J. J. Minneapolis
 Kapsner, A. T. Princeton
 † Karges, L. E. Camp Atterbury, Ind.
 Karleen, C. N. Jackson
 Karleen, C. I. Minneapolis
 Karlen, Markle Rochester
 Karn, J. F. Ortonville
 Karon, I. M. Saint Paul
 Kasper, E. M. Saint Paul
 Kath, R. H. Arlington
 † Kath, Louis J. Long Beach, Calif.
 Katzberg, Lewis Willmar
 Kaufman, E. J. Appleton
 Kaufman, H. J. Minneapolis
 Kaufman, W. B. Mankato
 Kaufman, Wm. C. Appleton
 Kearney, R. W. Mankato
 Kearns, Thomas P. Rochester
 Keating, F. R., Jr. Rochester
 Keefe, R. E. Saint Paul
 Keil, M. A. Albert Lea
 Keith, H. M. Rochester
 † Keith, N. M. Rochester
 Keith, Paul J. Milaca
 Keithahn, E. E. Sleepy Eye
 Kelby, G. M. Minneapolis
 Kelley, Walter R. Duluth
 Kelly, A. C. Duluth
 Kelly, A. H. Rochester
 Kelly, J. F. Cold Spring
 Kelly, James H. Wadena
 Kelly, J. P. Minneapolis
 † Kelly, J. V. Saint Paul
 Kelly, R. T. Nashauk
 † Kelsey, C. G. Saint Paul
 Kelsey, C. M. Saint Paul
 Kemp, A. F. Mankato
 Kenefick, E. C. Saint Paul
 Kennedy, C. V. Minneapolis
 Kennedy, G. L. Faribault
 † Kennedy, Jane F. Minneapolis
 Kennedy, R. L. J. Rochester

ALPHABETICAL ROSTER

Kenney, F. D. Rochester
 † Kent, Geo. B. Rochester
 Kenyon, T. J. Saint Paul
 Kerkhof, A. C. Minneapolis
 Kernohan, J. W. Rochester
 Kesting, Herman. Saint Paul
 Kevern, J. L. Hennepin
 † Keyes, J. D. Winona
 † Keyes, R. W. Ely
 † Kiely, J. M. Rochester
 † Kiely, James P. San Francisco, Calif.
 Kierland, R. R. Rochester
 Kiesler, Frank, Jr. Minneapolis
 Kilbride, E. A. Worthington
 † Kilby, Ralph A. Charleston, S. Carolina
 Kimmel, G. C. Red Wing
 † King, E. A. Minneapolis
 King, F. W. Oak Terrace
 † King, George L. Saint Paul
 Kinkade, B. R. Ada
 Kinports, E. B. International Falls
 Kinsella, T. J. Minneapolis
 Kirbv, Thomas J., Jr. Rochester
 † Kirk, G. P. East Grand Forks
 Kirklm, B. R. Rochester
 Kirklm, J. W. Rochester
 † Kistler, A. J. Minneapolis
 † Kitzberger, E. J. New Ulm
 † Klakeg, Clayton H. Rochester
 Kleckner, Martin S. Evanston, Ill.
 Klefstad, Lloyd H. Greenbush
 Klein, Harry. Duluth
 Klein, Henry N. Saint Paul
 Klein, Jos. Saint Paul
 Klein, Wm. A. Duluth
 Kletschka, H. D. Brooklyn
 Klima, Wm. W. Stewart
 † Kline, R. F. Alaska
 † Knapp, F. N. Duluth
 Knapp, M. E. Minneapolis
 Knight, E. G. Swanville
 Knight, R. T. Minneapolis
 † Knight, Ray R. Minneapolis
 Knoche, H. A. Morgan
 Knoll, W. V. Duluth
 Knudsen, Helen L. Minneapolis
 Knutson, G. A. Hallock
 Knutson, G. E. Minneapolis
 Knutson, L. A. Spring Grove
 Knutson, R. C. Saint Paul
 Knutson, Katherine H. Rochester
 Koelsche, G. A. Lakefield
 Koenecke, Fred H., Jr. Lakefield
 Koenigsberger, Chas. Mankato
 Koepcke, G. M. Minneapolis
 Kohlbr, Carl O. Duluth
 Kolars, James J. Faribault
 Kolb, Lawrence. Rochester
 Koller, Hermann M. Minneapolis
 Koller, Louis R. Minneapolis
 Koller, Robert. Minneapolis
 Kooda, Jennings C. Morris
 † Koop, Severin H. Richmond
 Korchik, John P. Minneapolis
 Korda, Henry A. Pelican Rapids
 Kortsch, Ferdinand P. Prior Lake
 Koskela, Lauri. Shaker Heights, Ohio
 Kostick, W. R. Fertile
 Kotchevar, F. R. Eveleth
 Kottke, F. J. Minneapolis
 Kotval, R. J. Pipestone
 Koucky, R. W. Minneapolis
 Kozza, D. W. St. Paul
 † Kozzberg, Oscar. Moose Lake
 Krause, C. W. Fairmont
 Kremen, Arnold J. Minneapolis
 Kreuzer, Titus. Marshall
 Krezowski, Thomas. St. Paul
 Krieser, A. E. Anoka
 Kroboth, H. J. Rochester
 † Kroll, Harry G. Rochester
 † Krout, R. M. Rochester
 Krueger, V. R. Nopeming
 Krusen, F. H. Rochester
 Kruzick, S. J. Sleepy Eye
 Krystosek, L. A. Clara City
 Kucera, F. J. Hopkins
 Kucera, S. J. Northfield
 Kucera, Wm. J. Minneapolis
 Kucera, William J., Jr. Minneapolis
 Kugler, A. A. St. Paul
 Kuhlmann, L. B. Melrose
 Kulstad, O. S. Dodge Center
 Kulzer, Nobert. Hastings
 Kunkel, Wm. M., Jr. Rochester
 † Kurtin, H. J. Blooming Prairie
 † Kurtin, Jos. J. Blooming Prairie
 Kuske, A. W. St. Paul
 † Kusske, A. L. New Ulm
 † Kusske, B. W. St. Louis Park
 Kusske, D. R. St. Paul
 Kusz, Clarence. Minneapolis

Kvale, W. F. Rochester
 LaBree, John. St. Louis Park
 LaBree, R. H. Duluth
 † Lacy, Paul E. Rochester
 Lagaard, S. M. Minneapolis
 Laikola, L. A. Adrian
 † Laird, A. T. Duluth
 † Lajoie, J. M. Minneapolis
 Lake, C. F. Rochester
 Lamb, H. Douglas. Minneapolis
 Lang, L. A. Minneapolis
 Langhoff, A. H. Mankato
 Lannin, B. G. St. Paul
 Lannin, D. R. St. Paul
 Lapiere, A. P. Minneapolis
 Lapiere, J. T. Minneapolis
 Larrabee, W. F. Grosse Ile, Mich.
 † Latsen, F. Wm. Minneapolis
 † Larson, Arnold. Detroit Lakes
 † Larson, C. M. Minneapolis
 † Larson, Eva Jane. St. Paul
 † Larson, G. E. Cambridge
 † Larson, J. T. South St. Paul
 † Larson, K. R. St. Paul
 † Larson, L. M. Minneapolis
 † Larson, Leonard M. Oak Terrace
 † Larson, Laren. Watertown
 † Larson, Loren J. Minneapolis
 † Larson, L. J. Minneapolis
 † Larson, M. H. Nicollet
 † Larson, M. I. St. Paul
 † Larson, O. E. H. Zumbrota
 † Larson, P. N. Minneapolis
 † Larson, R. H. Anoka
 † Latterell, K. E. Duluth
 † LaVake, R. T. Minneapolis
 Law, Harrison E. Virginia
 Lax, M. H. St. Paul
 † Layman, C. W. Minneapolis
 † Lazar, H. L. Excelsior
 † Lazarte, J. A. Rochester
 † Leahy, Bartholomew. St. Paul
 † Leavenworth, R. O. St. Paul
 † Leavitt, H. H. Phoenix, Ariz.
 † Lebowske, J. A. Minneapolis
 † Leck, P. C. Austin
 † Leddy, E. T. Rochester
 † Lee, H. W. Brainerd
 † Lee, N. J. Tracy
 † Lee, W. J. Claremont
 † Leemhuis, A. J. Minneapolis
 † Leggett, E. A. Bemidji
 † Leibold, H. H. Parkers Prairie
 † Leick, R. M. St. Paul
 † Leitch, Archibald. St. Paul
 † Leitschuh, L. F. Winsted
 † Leland, H. R. Minneapolis
 † Lemon, W. S. Clifton Forge, Va.
 † Lenander, M. E. St. Peter
 † Lenarz, A. J. Brownville
 † Lende, Norman. Faribault
 † Lenz, J. R. Morton
 † Lenz, Otto A. Minneapolis
 † Leonard, L. J. Minneapolis
 † Leonard, Saml. Minneapolis
 † Leopold, B. A. Brownsville, Tex.
 † Lepak, F. J. Duluth
 † Lepak, J. A. St. Paul
 † Lerche, William. Cable, Wis.
 † Lerner, A. R. Minneapolis
 † Lescoe, Richard. Rochester
 † Lester, M. J., Jr. Truman
 † Lev, Ralph. Rochester
 † Leven, N. L. St. Paul
 † Leverenz, C. W. St. Paul
 † Levin, B. G. St. Paul
 † Levitt, G. X. St. Paul
 † Lewis, A. J. Hennepin
 † Lewis, B. L. Rochester
 † Lewis, C. B. Hennepin
 † Lewis, C. W. St. Cloud
 † Lewis, F. J. Minneapolis
 † Lewis, J. S. Minneapolis
 † Lexa, F. J. Lonsdale
 † Libert, J. N. St. Cloud
 † Lick, C. L. St. Paul
 † Lick, L. C. Rochester
 † Lick, Wm. J., Jr. St. Paul
 † Lieberman, N. S. St. Paul
 † Liedloff, A. G. Mankato
 † Lien, R. J. St. Paul
 † Liffing, W. W. Red Wing
 † Lightborn, E. J. St. Paul
 † Lilleberg, N. J. St. Paul
 † Lillehei, C. Walton. Minneapolis
 † Lillehei, E. J. Robbinsdale
 † Lillie, H. I. Rochester
 † Lillie, John C. Rochester
 † Lima, L. R. Montevideo
 † Lind, C. J., Jr. Ft. Sam Houston, Tex.
 † Lindahl, M. J. Sherburn
 † Lindberg, A. L. Wheaton

Lindberg, A. C. Minneapolis
 Lindberg, V. L. Minneapolis
 Lindberg, W. R. Minneapolis
 Lindblom, A. E. No. Mankato
 † Linde, Herman. Cyrus
 † Lindell, Robert. St. Paul
 † Lindeman, R. J. Montgomery, Ala.
 † Lindgren, R. Minneapolis
 † Lindquist, R. H. Minneapolis
 † Linner, Gunnar. Minneapolis
 † Linner, H. P. Minneapolis
 † Linner, J. H. Minneapolis
 † Linner, P. W. Minneapolis
 † Lippman, E. S. Minneapolis
 † Lippman, H. S. Minneapolis
 † Lippmann, E. W. Hutchinson
 † Lipschultz, Oscar. Minneapolis
 † Lipscomb, P. R. Rochester
 † Liss, H. R. San Francisco
 † Litchfield, John T. Minneapolis
 † Litin, E. M. Rochester
 † Litman, A. B. Minneapolis
 † Litman, S. N. Duluth
 † Lober, P. H. Minneapolis
 † Lofgren, Karl A. Rochester
 † Lofness, S. V. Oak Terrace
 † Logan, A. H. Rochester
 † Logan, G. B. Rochester
 † Logan, J. O. Wadena
 † Logeheil, R. C. Saint Cloud
 † Lehmann, J. G. Pipestone
 † Loken, S. M. Saint Paul
 † Loken, Theodore. Ada
 † Lommen, P. A. Austin
 † Longfellow, H. W. Brainerd
 † Loomis, E. A. Minneapolis
 † Loomis, G. L. Winona
 † Lorentzen, E. S. Detroit Lakes
 † Lorton, W. L. Junction City, Kan.
 † Lott, F. H. Minneapolis
 † Love, F. A. Carlos
 † Love, J. G. Rochester
 † Lovett, Beatrice R. Oak Terrace
 † Lovshin, W. C. Eveleth
 † Lowe, E. R. South Saint Paul
 † Lowe, T. A. South Saint Paul
 † Lowry, Elizabeth C. Minneapolis
 † Lowry, Paul. Minneapolis
 † Lucas, J. E. Saint Paul
 † Luckeme, C. J. Saint Cloud
 † Lucke, W. W. Minneapolis
 † Lufkin, N. H. Minneapolis
 † Lund, C. J. T. Fergus Falls
 † Lund, George. Minneapolis
 † Lund, W. L. Staples
 † Lundberg, Ruth I. Minneapolis
 † Lundblad, R. M. Clara City
 † Lundblad, R. A. Minneapolis
 † Lundblad, S. W. Minneapolis
 † Lundell, C. L. Granite Falls
 † Lundgren, A. C. Minneapolis
 † Lundholm, A. M. Saint Paul
 † Lundquist, C. W. Owatonna
 † Lundquist, V. J. P. Minneapolis
 † Lundsten, L. C. Bemidji
 † Lundy, J. S. Rochester
 † Luth, D. V. Duluth
 † Lynch, F. W. Saint Paul
 † Lynch, M. J. Minneapolis
 † Lyons, Henry R. Rochester
 † Lysne, Henry. Minneapolis
 † Lysne, Myron. Minneapolis
 † MacCarthy, J. D. Minneapolis
 † MacCarty, C. S. Rochester
 † MacCarty, W. C. Rochester
 † MacDonald, D. A. Minneapolis
 † MacDonald, John. Minneapolis
 † MacDonald, Roger A. Little Fork
 † MacFarlane, P. H. Chisholm
 † Mach, F. B. Minneapolis
 † Mach, R. F. Pine City
 † MacKenzie, D. A. Rochester
 † MacKinnon, D. C. Minneapolis
 † MacKinnon, H. N. Rochester
 † Macklin, W. E., Jr. Willmar
 † Mackoff, S. M. Saint Paul
 † MacLean, Alexander. Phoenix, Ariz.
 † MacNie, John S. Minneapolis
 † MacRae, G. C. Duluth
 † Madden, J. F. Saint Paul
 † Madison, M. S. Rochester
 † Madland, R. S. Saint Paul
 † Maeder, E. C. Minneapolis
 † Maertz, R. W. Faribault
 † Maertz, W. F. Saint Paul
 † Magath, T. B. Rochester
 † Magney, F. H. Duluth
 † Magnuson, A. E. Wheaton
 † Magnuson, R. C. Cambridge
 † Magraw, R. M. Minneapolis
 † Mahle, D. G. Plainview

ALPHABETICAL ROSTER

Mahowald, Aloys.....Fergus Falls
Maitland, E. J.....Jackson
Maland, C. O.....Minneapolis
Malerich, J. A.....West Saint Paul
Malmstrom, J. A.....Virginia
Maloney, W. F.....Minneapolis
Manger, W. M.....Rochester
Mankey, J. T.....Minneapolis
Mankin, H. C.....Rochester
Mankin, H. W.....Rochester
Mann, F. C.....Rochester
Mann, F. D.....Rochester
Mann, Joseph D.....Rochester
Mann, R. H.....Rochester
Manning, Phil R.....Rantoul, Ill.
Manson, F. M.....Worthington
March, K. A.....Cambridge
Marcle, W. J.....Minneapolis
Marking, G. H.....Minneapolis
Markle, G. B., IV.....Ft. Monroe, Va.
Marks, R. W.....Saint Paul
Marlow, G. V.....St. Paul
Marshall, C. M.....Crosby
Martens, T. G.....Rochester
Martin, A. C.....Luverne
Martin, D. L.....Saint Paul
Martin, G. R.....Minneapolis
Martin, G. M.....Rochester
Martin, T. P.....Arlington
Martin, W. C.....Duluth
Martin, W. J.....Rochester
Martineau, J. L.....Saint Paul
Martinson, E. J.....Wayzata
Martinson, E. J.....Wayzata
Masson, Duncan M.....Rochester
Masson, J. C.....Rochester
Masson, J. K.....Rochester
Matchan, G. R.....Saint Paul
Mathieson, D. R.....Rochester
Matthews, James H.....Minneapolis
Mattill, P. A.....Oak Terrace
Mattison, P. M.....Winona
Mattson, A. D.....Saint James
Mattson, H. A. N.....Minneapolis
Maxeiner, S. R.....Minneapolis
Maxeiner, S. R., Jr.....Rochester
Maxfield, Robert G.....Rochester
Maxwell, J. B.....Rochester
Mayne, J. G.....Rochester
Mayne, R. M.....Nopeming
Mayo, C. W.....Rochester
Maytum, Chas. K.....Rochester
McBean, J. B.....Rochester
McBurney, R. P.....Nopeming
McCabe, J. S.....Saint Paul
McCaffrey, F. J.....Minneapolis
McCain, D. F.....Bemidji
McCain, D. L.....Saint Paul
McCann, E. J.....Minneapolis
McCannel, M. A.....Minneapolis
McCarran, S. P.....Rochester
McCarten, F. M.....Stillwater
McCarthy, A. M.....Willmar
McCarthy, Donald.....Saint Paul
McCarthy, J. E.....Saint Paul
McCarthy, W. R.....Saint Paul
McCartney, J. S.....Minneapolis
McCarty, P. D.....Ely
McClanahan, J. H. White Bear Lake
McClanahan, T. S. White Bear Lake
McCloud, C. N., Jr.....Saint Paul
McClure, Rensselaer, Jr.....Rochester
McConahey, W. M., Jr.....Rochester
McCormick, D. P.....Minneapolis
McCoy, Mary K.....Duluth
McDaniel, Orianna.....Minneapolis
McDonald, A. L.....Duluth
McDonald, J. R.....Rochester
McDonald, O. G.....Duluth
McDonald, W. J.....Crookston
McDowell, J. P.....Saint Cloud
McEaney, C. T.....Owatonna
McEwan, Alexander.....Saint Paul
McFarland, A. H.....Minneapolis
McFarlane, J. A.....Rochester
McGandy, J. E.....Minneapolis
McGeary, G. E.....Minneapolis
McGeary, M. D.....Oceanside, Calif.
McGroarty, B. J.....Saint Paul
McGroarty, J. L.....Easton
McHaffie, O. J.....Duluth
McInerney, M. W.....Minneapolis
McIntire, H. M.....Waseca
McIntire, S. F.....Rochester
McIntyre, J. A.....Owatonna
McIver, Bert A.....Lowry
McKaig, A. M.....Red Lake Falls
McKaig, C. B.....Pine Island
McKee, Robert E.....McIver
McKelvey, John L.....Minneapolis
McKenna, Elizabeth.....Austin
McKenna, J. K.....Austin

McKenna, M. J.....Grand Rapids
McKenzie, C. H.....Minneapolis
McKenzie, Eva E.....Saint Paul
McKinlay, C. A.....Minneapolis
McKinney, F. S.....Minneapolis
McLane, W. O.....Brainerd
McLaren, J. M.....Minneapolis
McLaughlin, B. H.....Minneapolis
McLeod, J. J.....Japan
McLeod, J. L.....Grand Rapids
McMahon, M. J.....Green Isle
McManus, W. F.....Princeton
McMorris, R. O.....Rochester
McMurtrie, W. B.....Minneapolis
McNeil, J. J.....Minneapolis
McNutt, J. R.....Duluth
McPheeters, H. O.....Minneapolis
McQuarrie, Irvine.....Minneapolis
McWhorter, H. E.....Rochester
Mead, C. H.....Duluth
Meade, J. R.....Saint Paul
Mears, B. J.....Saint Paul
Mearns, F. L.....Northfield
Mears, Thomas W.....Rochester
Medelman, J. P.....Saint Paul
Medoff, Alvin S.....Rochester
Meinert, A. E.....Winona
Melancon, J. F.....Saint Paul
Melby, Benedick.....Bloomington
Melby, O. F.....Thief River Falls
Meller, R. L.....Minneapolis
Melzer, G. R.....Lyle
Menges, Charles G. H.....Rochester
Menold, W. F.....Saint Paul
Mensheba, Nicholas.....Forest Lake
Mercil, W. F.....Crookston
Merkert, C. E.....Minneapolis
Merkert, G. L.....Minneapolis
Merner, T. B.....Faribault
Merrick, C. T.....Saint Paul
Merrick, R. L.....Saint Paul
Merrill, Elisabeth.....Minneapolis
Merrill, R. W.....Morris
Merriman, E. L.....Duluth
Merritt, W. A.....Rochester
Metcalfe, N. B.....Princeton
Meyer, A. A.....Melrose
Meyer, A. J.....Minneapolis
Meyer, E. L.....Minneapolis
Meyer, F. C.....Kenyon
Meyer, J. O.....Grand Rapids
Meyer, P. F.....Faribault
Meyer, Robert J.....Minneapolis
Meyer, Robert P.....Faribault
Meyering, E. A.....Saint Paul
Michael, Isaac.....Rochester
Michael, J. C.....Minneapolis
Michel, H. H.....Minneapolis
Michels, R. P.....Willmar
Michelson, H. E.....Minneapolis
Michienzi, L. J.....Saint Paul
Mickelsen, Emma F.....Minneapolis
Mickelson, J. C.....Mankato
Midthune, A. S.....Lake Park
Mihaupt, E. N.....Saint Cloud
Miller, A. L.....Minneapolis
Miller, E. W.....Anoka
Miller, Harold E.....Minneapolis
Miller, Herman.....Grand Meadow
Miller, Hugo E.....Minneapolis
Miller, J. C.....Minneapolis
Miller, J. M.....Indianapolis, Ind.
Miller, R. D.....Rochester
Miller, R. H.....Rochester
Miller, Samuel.....Albert Lea
Miller, V. L.....Mankato
Miller, W. R. E.....Red Wing
Miller, W. T.....West Saint Paul
Miller, Z. R.....Saint Paul
Millett, D. K.....Minneapolis
Mills, J. L.....Winnebago
Mills, S. D.....Rochester
Milnar, F. J.....Saint Paul
Milton, J. S.....Minneapolis
Minge, R. K.....Worthington
Minno, Alexander M.....Rochester
Minsky, A. J.....Minneapolis
Minty, E. W.....Duluth
Misbach, W. D.....Fairmont
Mitby, I. L.....Minneapolis
Mitchell, B. D.....Minneapolis
Mitchell, E. C.....Minneapolis
Mitchell, M. T.....Minneapolis
Mixer, H. W.....Minneapolis
Moberg, C. W.....Detroit Lakes
Moe, J. H.....Minneapolis
Moe, R. J.....Duluth
Moe, Thos.....Moose Lake
Moehn, John T.....Minneapolis
Moehring, H. G.....Duluth
Moen, J. K., Jr.....Minneapolis
Moersch, F. P.....Rochester

Moersch, H. J.....Rochester
Moga, J. A.....Saint Paul
Molander, H. A.....Saint Paul
Molenaar, Robert E.....Cannon Falls
Mollers, T. P.....Soudan
Monahan, Elizabeth.....Minneapolis
Monahan, Robert H.....St. Paul
Monroe, P. B.....Cloquet
Monserud, N. O.....Cloquet
Monson, E. M.....Minneapolis
Monson, L. J.....Canby
Monsour, K. J.....Rochester
Montgomery, Hamilton.....Rochester
Mooney, Robert.....St. Paul
Moore, George E.....Buffalo, N. Y.
Moore, I. H.....Minneapolis
Moore, Kenneth D.....Rochester
Moorhead, Marie.....Minneapolis
Moos, D. J.....Minneapolis
Moquin, Marie A.....Saint Paul
Morehead, D. E.....Owatonna
Moren, J. A.....Saint Paul
Morgan, H. O.....Amboy
Moriarty, Berenice.....Saint Paul
Moriarty, Cecile R.....Saint Paul
Mork, A. H.....Anoka
Mork, F. E.....Anoka
Morlock, C. G.....Rochester
Morris, K. L.....Rochester
Morrison, C. J.....Minneapolis
Morse, M. P.....LeRoy
Morsman, L. W.....Hibbing
Mortensen, J. D.....Rochester
Mortensen, N. G.....Minneapolis
Morton, G. H., Scott Air Base, Ill.
Mosby, M. E.....Long Prairie
Moses, R. R.....Kenyon
Mosser, Donn G.....Minneapolis
Mouritsen, G. J.....Fergus Falls
Moyer, J. B.....Duluth
Muir, W. F.....Browns Valley
Mulder, D. W.....Rochester
Mullander, W. M.....Minneapolis
Muller, A. E.....North Saint Paul
Muller, R. J.....Saint Paul
Mulligan, A. M.....Brainerd
Mundahl, H. R.....Saint Paul
Munson, M. S.....Barnum
Murphy, E. P.....Minneapolis
Murphy, J. T.....Saint Paul
Murphy, J. E.....Marshall
Murray, R. A.....Hibbing
Musachio, N. F.....Foley
Mussey, Mary E.....Rochester
Mussey, R. D.....Rochester
Musty, N. J.....Minneapolis
Myers, C. I.....San Antonio, Tex.
Myers, J. A.....Minneapolis
Myers, T. A.....Rochester
Myhre, J. A.....Minneapolis
Myre, C. R.....Paynesville
Myre, T. T.....Paducah, Ky.

Naegeli, A. E. Newport Beach, Calif.
Nagel, H. D.....Wadena
Nash, L. A.....Saint Paul
Naslund, A. W.....Minneapolis
Nauth, B. S.....Minneapolis
Navratil, D. R.....Montgomery
Neal, J. M.....St. Paul
Nealy, D. E.....Adrian
Neary, R. P.....Minneapolis
Neel, H. B.....Albert Lea
Neff, W. S.....Virginia
Nehring, J. P.....Preston
Neils, V. E.....Sauk Rapids
Nelson, A. S.....Baltimore
Nelson, Bernette G.....Minneapolis
Nelson, Bernice A.....Minneapolis
Nelson, C. A.....Worthington
Nelson, C. B.....Minneapolis
Nelson, C. E. J.....Albert Lea
Nelson, David.....Alexander
Nelson, E. N.....Minneapolis
Nelson, E. J.....Owatonna
Nelson, G. E.....Fairfax
Nelson, Harvey.....Minneapolis
Nelson, H. E.....Crookston
Nelson, L. E.....Minneapolis
Nelson, L. A.....Saint Paul
Nelson, M. C.....Minneapolis
Nelson, Maxine O.....Minneapolis
Nelson, M. S.....Granite Falls
Nelson, N. P.....Minneapolis
Nelson, O. L. N.....Minneapolis
Nelson, Roy A.....Fergus Falls
Nelson, R. L.....Duluth
Nelson, Wm. C.....Rochester
Nelson, W. L.....Minneapolis
Nelson, W. O. B.....Fergus Falls
Nerenberg, S. T.....Minneapolis
Nesbitt, Samuel.....Minneapolis

ALPHABETICAL ROSTER

Nesheim, M. O. Emmots
 Nessa, C. B. Saint Cloud
 Nesse, J. A. Austin
 Nesset, L. B. Minneapolis
 Nesset, W. D. Minneapolis
 Neumaier, Arthur. Glencoe
 Neuman, H. W. Rochester
 Neumann, C. A. Rochester
 Neumeister, Charles. Minneapolis
 Nice, Charles M. Minneapolis
 Nichols, Donald R. Rochester
 Nicholson, M. A. Duluth
 Nickerson, J. R. Heron Lake
 Nickerson, N. D. Fairmont
 Nielson, A. M. Northfield
 Nietfeld, A. B. Sauk Centre
 Nilson, H. J. North Mankato
 Nimlos, K. O. Saint Paul
 Nimlos, Lenore O. Saint Paul
 Ninneman, N. N. Waconia
 Nissus, George. Duluth
 Nixon, J. B. Crosby
 Noble, J. F. St. Paul
 Noble, J. L. Saint Paul
 Noonan, W. J. Minneapolis
 Noran, A. S. N. Minneapolis
 Noran, H. H. Minneapolis
 Norberg, C. E. Cloquet
 Nord, R. E. Minneapolis
 Nordin, G. T. Minneapolis
 Nordland, Martin. Minneapolis
 Nordland, Martin, Jr. Minneapolis
 Nordman, W. F. Mora
 Norman, J. F. Crookston
 Normann, S. T., Jr. Waseca
 Norris, N. T. Caledonia
 Norum, H. A. Minneapolis
 Norval, M. A. Minneapolis
 † Noth, H. W. Minneapolis
 † Novak, E. E. New Prague
 Nuetschman, A. W. Springfield
 Nutting, R. E. Fairbault
 Nydahl, M. J. Minneapolis
 Nye, Katherine A. Saint Paul
 Nye, Lillian L. Saint Paul
 Nygren, W. T. Brahm
 Nylander, E. G. Minneapolis
 † Nystrom, Ruth G. Malibu Beach, Cal.
 Nywall, D. D. Slayton

O'Brien, J. C. Saint Paul
 O'Brien, L. T. Breckenridge
 † O'Connor, D. C. Eden Valley
 O'Connor, L. J. Saint Paul
 O'Donnell, D. M. Ortonville
 O'Donnell, J. E. Minneapolis
 O'Hanlon, J. A. Minneapolis
 O'Kane, T. W. Saint Paul
 O'Keefe, J. P. Saint Cloud
 † O'Keefe, Mathew. Rochester
 † O'Leary, John B. St. Paul
 O'Leary, J. H. Thief River Falls
 O'Leary, P. H. Rochester
 † O'Malley, Valentine. Saint Paul
 O'Neil, J. C. Duluth
 O'Phelan, E. Harvey. Minneapolis
 O'Reilly, B. E. Saint Paul
 † O'Shaughnessy, E. J. Rochester
 Oberg, C. M. Minneapolis
 Ochsner, C. G. Wabasha
 Ockuly, Orville. Saint Paul
 Odel, H. M. Rochester
 Odland, M. E. Detroit Lakes
 Odland, Olin. Granite Falls
 Oeljen, S. C. G. Waseca
 Ogburn, Paul L. Rochester
 Ogden, Warner. Saint Paul
 Ohage, Justus. Saint Paul
 Olds, G. H. New Richland
 Olive, J. T., Jr. Rochester
 Oliver, J. L. Graceville
 Oliver, James. Moorhead
 Olmanson, F. G. Saint Peter
 Olsen, A. M. Rochester
 Olsen, E. G. Minneapolis
 Olson, R. L. Saint Paul
 Olson, Albert E. Duluth
 Olson, Albert J. Owatonna
 Olson, Alton C. Minneapolis
 Olson, Archibald O. Duluth
 Olson, Carl J. Minneapolis
 Olson, Carlton K. Minneapolis
 Olson, Charles A. Saint Paul
 Olson, Chester J. Belle Plaine
 Olson, Detlof M. Minneapolis
 Olson, Duane O. C. Gaylord
 Olson, Ernest A. Pine Island
 Olson, Grant E. West Concord
 Olson, Lillian A. Ah-Gwah-Ching
 † Olson, Olof A. Minneapolis
 Onsgard, L. K. Houston

Openshaw, C. R. Rochester
 Oppegaard, C. L. Crookston
 † Oppegaard, M. O. Crookston
 Oppen, E. G. Minneapolis
 Oppen, M. G. Wayzata
 Opsahl, L. J. Willmar
 Opstad, E. J. Oak Terrace
 Orr, B. A. Faribault
 † Orsoll, H. S. Japan
 Osborn, D. O. Austin
 Osborn, J. E. Rochester
 Ostergaard, Erling. Evansville
 Ostergren, E. W. Saint Paul
 Ostling, B. C. Kerkhoven
 Otto, H. C. Frazee
 Ouellette, A. J. Saint Paul
 Ourada, A. L. Ceylon
 Owen, Charles A., Jr. Rochester
 Owen, H. W. Rochester
 Owens, F. M. Jr. Saint Paul
 Owens, W. A. Montevideo

‡ Paciotti, V. J. St. Paul
 Page, R. L. Saint Charles
 Palen, B. J. Minneapolis
 Palmer, C. F. Albert Lea
 Palmer, H. A. Blackduck
 † Palmerton, E. S. Minneapolis
 Pankratz, P. J. Mountain Lake
 Papermaster, Ralph. Two Harbors
 Papermaster, T. C. Minneapolis
 Park, W. E. Minneapolis
 Parker, C. W. Wadena
 Parker, H. L. Rochester
 † Parker, O. W. Duluth
 Parker, Philip J. Thief River Falls
 Parker, R. L. Rochester
 Parker, W. E. Sebeka
 Parker, Wilbert H. Chisholm
 Parkhill, Edith M. Rochester
 Parson, E. L. Duluth
 Parson, E. L. B. Elbow Lake
 Parson, L. R. Elbow Lake
 Parsons, R. L. Monterey
 Parsons, W. B., Jr. Rochester
 Pasek, A. W. Cloquet
 † Pasek, E. A. Chisago City
 Patch, O. B. Duluth
 Patrick, Robert. Rochester
 Patterson, H. D. Slayton
 Patterson, W. L. Fergus Falls
 Paulson, Elmer. Worthington
 Paulson, J. A. Rochester
 Paulson, T. S. Fergus Falls
 Paulson, Wallace. St. Paul
 Paynter, C. R. Rochester
 † Pearsall, R. P. Virginia
 Pearson, B. F. Shakopee
 Pearson, F. R. Saint Paul
 Pearson, M. M. Saint Paul
 † Pearson, R. T. Shakopee
 Pease, Gertrude L. Rochester
 Peck, Lewellyn R. Hastings
 Pedersen, E. N. Saint Paul
 Pedersen, R. C. Duluth
 Pederson, Robert L. Willmar
 Peltier, Leonard F. Minneapolis
 † Peluso, Charles R. Minneapolis
 ‡ Pemberton, A. H. Rochester
 † Pemberton, John. Rochester
 Pender, John W. Rochester
 † Penhall, F. W. Willmar
 Penn, E. L. Springfield
 Penn, G. N. Mankato
 Pennie, D. F. V. Duluth
 Peppard, T. A. Minneapolis
 Perlman, E. C. Minneapolis
 Perlman, Herschel. Minneapolis
 Perry, Harold. Rochester
 Person, J. P. Albert Lea
 Person, Waldemar N. Rochester
 Pertman, H. L. Minneapolis
 Peteler, Jennings L. Minneapolis
 Pertl, A. L. Canby
 Peters, G. A. Rochester
 † Peters, William J. Rochester
 Petersen, D. H. Northfield
 Petersen, G. L. Minneapolis
 † Petersen, J. R. Minneapolis
 Petersen, M. C. Rochester
 Petersen, P. C. Minneapolis
 Petersen, W. E. Minneapolis
 Peterson, D. B. Saint Paul
 Peterson, D. H. Saint Paul
 Peterson, E. N. Virginia
 Peterson, H. O. Saint Paul
 Peterson, H. W. Minneapolis
 Peterson, J. L. E. Saint Paul
 Peterson, J. H. Duluth
 Peterson, Kenneth A. Marshall
 Peterson, K. H. Hutchinson
 Peterson, N. P. Minneapolis
 Peterson, O. H. Minneapolis

† Peterson, O. H., Jr. Minneapolis
 Peterson, Palmer. Minneapolis
 Peterson, P. E. Minneapolis
 Peterson, R. A. Vesta
 Peterson, Stanley C. Austin
 Peterson, W. C. Minneapolis
 Peterson, W. E. Willmar
 Peterson, W. H. Spring Valley
 Peterson, W. Henry. Minneapolis
 Petit, J. V. Minneapolis
 Petit, L. J. Minneapolis
 Petraborg, H. T. Aitkin
 Pettersen, George. Mabel
 † Pettet, John. Rochester
 Pewters, J. T. Minneapolis
 Peyton, W. T. Minneapolis
 Phares, O. C. Saint Cloud
 Phares, W. S. Rochester
 Phelps, K. A. Minneapolis
 † Philip, D. R. Windom
 Pierce, C. H. Wadena
 Pierce, J. R. Virginia
 Pierce, R. B. Renville
 Pierson, R. F. Slayton
 † Piper, M. C. LaCanada, Calif.
 Piper, W. A. Mountain Lake
 Plasha, M. K. Glenwood
 Plass, H. F. R. Minneapolis
 † Platon, E. S. Minneapolis
 Plimpton, N. C., Jr. Minneapolis
 † Plondke, F. J. Saint Paul
 Plotke, H. L. Saint Paul
 Plucker, Milton W. Clarkfield
 Pogue, R. E. Watertown
 Pohl, J. F. M. Minneapolis
 † Poirier, Jos. A. Forest Lake
 Polley, Howard F. Rochester
 Pollock, David K. Minneapolis
 Polski, P. G. South Saint Paul
 Polzak, J. A. Minneapolis
 Pone, John. Silver Lake
 Ponterio, J. E. Shakopee
 Pool, T. L. Rochester
 Poppe, F. H. Minneapolis
 Porter, O. M. Willmar
 Potek, David. Minneapolis
 Potter, R. B. Minneapolis
 † Powers, Fred H. Duluth
 Powers, W. W. Rochester
 Prangen, A. DeH. Rochester
 † Pratt, F. J. Minneapolis
 ‡ Pratt, F. J., Jr. Minneapolis
 ‡ Pratt, G. F. Rochester
 ‡ Pratt, J. H., Jr. Rochester
 † Preisner, Irving A. Minneapolis
 † Preisinger, J. W. Renville
 Preston, P. J. Minneapolis
 Prickman, L. E. Rochester
 Priest, R. E. Minneapolis
 Priestley, J. T. Rochester
 † Prim, J. A. Minneapolis
 Prins, L. R. Albert Lea
 Proeschel, R. K. Willmar
 Proffitt, W. E. Minneapolis
 Proshack, C. E. Minneapolis
 Pruitt, R. D. Rochester
 Puma, E. E. Rochester
 Purnes, G. H. Hendricks
 Puma, R. H. Cloquet
 Pyle, Marjorie M. Nopeming

Quansstrom, V. E. Brainerd
 Quattelaum, Frank. Saint Paul
 Quello, R. O. B. Minneapolis
 Quer, E. A. Rochester
 † Quigley, W. P. Brooklyn, N. Y.
 † Quist, H. W. Minneapolis
 Quist, H. W., Jr. Minneapolis

Raadquist, C. S. Hibbing
 Raattama, John W. Keewatin
 † Rabens, R. A. Rochester
 Racer, Harley J. Gibson
 Raetz, S. J. Maple Lake
 Rajala, Arnold I. Grand Rapids
 Ralph, J. R. Saint Paul
 Ralston, D. E. Rochester
 † Ramsey, W. R. Saint Paul
 Randall, A. M. Ashby
 Randall, L. M. Rochester
 Randall, Raymond V. Rochester
 Ransom, H. R. Osseo
 † Ransom, M. L. Hancock
 Rasmussen, R. C. Saint Paul
 Rasmussen, W. C. Rochester
 Ravits, H. G. Saint Paul
 Rayner, Ralph R. Gibson
 Rea, C. E. Saint Paul
 Reader, D. R. Minneapolis
 Reed, Paul. Virginia
 Reese, G. A. Rochester

ALPHABETICAL ROSTER

Reff, A. R. Crookston
 Regnier, E. A. Minneapolis
 Reid, J. W. Saint Paul
 Reid, L. M. Excelsior
 Reif, H. A. Minneapolis
 Reif, H. J. Saint Cloud
 Reiley, R. E. Minneapolis
 Reineke, G. F. New Ulm
 Reitemeier, R. J. Rochester
 Reitmunn, J. H. Anoka
 ReMine, P. G. Rochester
 ReMine, W. H., Jr. Rochester
 Remole, W. D. Minneapolis
 Remsburg, R. R. Tracy
 Replogle, W. H. Los Angeles, Calif.
 Resch, J. A. Minneapolis
 Retter, Richard Camp Rucker, Ala.
 Rice, C. O. Minneapolis
 Rice, Frank B. Minneapolis
 Rice, Fred A. Minneapolis
 Rice, H. G. Moorhead
 Rice, Roberta G. Grand Island, Neb.
 Richards, E. T. F. Saint Paul
 Richards, W. B. Saint Cloud
 Richardson, E. J., Jr. Saint Paul
 Richardson, R. J. Saint Paul
 Richdorf, C. F. Minneapolis
 Richter, E. H. Fergus Falls
 Rick, P. F. W. Saint Paul
 Ridgway, A. M. Annandale
 Ridley, R. W. Rochester
 Rieke, W. Wayzata
 Rieschl, Elizabeth K. Jordan
 Rigler, L. G. Minneapolis
 Rigler, R. G. Portsmouth, Va.
 Ringle, O. F. Walworth
 Rinkey, Eugene Saint Paul
 Riordan, Elsie Minneapolis
 Rippepi, James D. Rochester
 Ritzinger, Frederik R. Lakefield
 Risch, R. E. Minneapolis
 Rissler, A. F. Stewartville
 Ritchie, W. P. Saint Paul
 Ritt, A. E. Saint Paul
 Rizer, D. K. Minneapolis
 Rizer, R. I. Minneapolis
 Robb, E. F. Minneapolis
 Robbins, L. P. Winona
 Robbins, O. Minneapolis
 Roberts, L. J. Minneapolis
 Roberts, O. W. Owatonna
 Roberts, S. W. Minneapolis
 Roberts, W. B. Minneapolis
 Robertson, J. B. Minneapolis
 Robertson, P. A. Austin
 Robilliard, C. M. Faribault
 Robinson, R. W. Worthington
 Robinson, C. O. Saint Paul
 Rocknem, R. E. Minneapolis
 Rockwell, C. V. Minneapolis
 Rockwood, P. H. Fergus Falls
 Rodda, F. C. Minneapolis
 Rodgers, R. S. Minneapolis
 Roehlike, A. B. Elk River
 Roemer, H. J. Winona
 Rogers, Arnold G. Rochester
 Rogers, C. W. Winona
 Rogers, S. F. Saint Paul
 Rogin, Norton Saint Louis Park
 Rogne, W. G. Spring Grove
 Roholt, C. L. McIntosh
 Roholt, H. B. Fosston
 Rohrer, Christian Des Moines, Ia.
 Rokala, H. E. Virginia
 Rolig, D. H. Saint Paul
 Rollie, O. O. Saint Paul
 Rollins, Pat Saint Charles
 Rollins, T. G. Elmore
 Rome, H. P. Rochester
 Romness, J. O. Rochester
 Romness, Kenneth Minneapolis
 Rood, D. C. Santa Barbara, Calif.
 Rooke, E. D. Rochester
 Rorem, Jos. A. Appleton
 Rosander, Phyllis Minneapolis
 Rose, J. T. Lakefield
 Rosenbaum, D. L. Minneapolis
 Rosendahl, F. G. Minneapolis
 Rosenfield, A. B. Minneapolis
 Rosenholtz, B. I. Saint Paul
 Rosenow, J. H. Minneapolis
 Rosenthal, F. H. Austin
 Rosenthal, Robert Saint Paul
 Rosenswald, R. M. Minneapolis
 Ross, A. J. Minneapolis
 Rosser, R. A. Morris
 Rossen, Ralph Hastings
 Roth, F. D. Mankato
 Roth, G. C. Saint Paul
 Rothmen, Morris Minneapolis
 Rothschild, H. J. Saint Paul
 Rotnem, O. M. Harmony
 Roust, H. A. Montevideo
 Roveltstad, R. A. Rochester

Rowe, O. W. Duluth
 Rowe, W. H. Fairmont
 Rowell, F. A. Thief River Falls
 Rowles, E. K. Coleraine
 Roy, P. C. Saint Paul
 Rozycski, Anthony Pine River
 Rucker, C. W. Rochester
 Rucker, W. H. Minneapolis
 Rud, N. E. Minneapolis
 Rudie, C. N. Saint Peter
 Rudie, P. S. Duluth
 Ruff, John D. Rochester
 Ruggles, G. M. Forest Lake
 Ruhberg, G. M. Tarzana, Calif.
 Rukavina, J. G. Hibbing
 Rumpf, C. W. Faribault
 Runquist, J. G. Duluth
 Rushton, J. G. Rochester
 Russ, H. H. Blue Earth
 Russett, A. N. Minneapolis
 Rusten, E. M. Minneapolis
 Ruthford, W. C. Brainerd
 Rutledge, L. H. Detroit Lakes
 Ryan, J. J. Saint Paul
 Ryan, W. M. Saint Paul
 Ryan, W. J. Duluth
 Rydberg, W. C. Minneapolis
 Rydland, A. D. Minneapolis
 Rygh, H. N. Atwater
 Rynda, E. R. New Prague
 Ryneason, E. H. Rochester
 Rysgaard, G. M. Northfield
 St. Cyr, H. M., Jr. Robbinsdale
 St. Cyr, K. J. Robbinsdale
 Sach-Rowitz, Alvan Moose Lake
 Sadler, W. P., Jr. Minneapolis
 Saffert, C. A. New Ulm
 Sahr, W. G. Hutchinson
 Saidy, J. T. San Mateo, Calif.
 Salassa, R. M. Rochester
 Salterman, B. I. Minneapolis
 Salk, R. J. Sauk Rapids
 Salter, R. A. Virginia
 Samuelson, L. G. Mankato
 Samuelson, Samuel Minneapolis
 Sandeen, R. M. Buffalo
 Sandell, S. T. Nopeming
 Sanderson, A. G. Anoka
 Sanderson, D. J. Fergus Falls
 Sandt, K. E. Minneapolis
 Sandven, N. O. Paynesville
 Sanford, A. H. Rochester
 Sanford, J. A. Savage
 Sanford, J. B. Battle Creek, Mich.
 Sanford, R. A. Minneapolis
 Sarff, O. E. Duluth
 Sargent, E. C., Jr. Austin
 Sarnecki, M. M. Saint Paul
 Satersmoen, Theodore Pelican Rapids
 Sather, E. L. Fosston
 Sather, E. R. Alexandria
 Sather, G. A. Fosston
 Sather, R. N. Fosston
 Sather, R. O. Crookston
 Saterlee, H. W. Lewiston
 Satterlund, V. L. Saint Paul
 Saunders, B. H., Jr. Rochester
 Saur, Wm. G. Rochester
 Sawate, F. J. Saint Paul
 Sawtell, Robert R. Jeffers
 Sawatzky, W. A. Minneapolis
 Sax, M. H. Duluth
 Sax, S. G. Duluth
 Saxman, Gertrude O. Georgetown
 Sayre, G. P. Rochester
 Sborov, A. M. Ft. McClellan, Ala.
 Scanlon, P. W. Rochester
 Schaaf, F. H. K. Minneapolis
 Schaar, Frances E. Minneapolis
 Schade, F. L. Worthington
 Schaefer, J. F. Owatonna
 Schaefer, W. G. Minneapolis
 Schamber, W. F. Parkers Prairie
 Schatz, F. J. Saint Cloud
 Scheidel, A. McK. Des Moines, Ia.
 Scheiffer, C. H. Rochester
 Scheldrup, N. H. Minneapolis
 Scherer, L. R. Minneapolis
 Scherling, S. S. Minneapolis
 Sherman, O. Rochester
 Schiele, B. C. Minneapolis
 Schimpelfenig, G. T. Chaska
 Schirber, M. J. Grand Rapids
 Schlesselman, G. H. Minneapolis
 Schmid, J. F. Duluth
 Schmidt, G. F. Minneapolis
 Schmidt, H. W. Rochester
 Schmidt, H. R. Winona
 Schmidt, P. A. Aurora, Ill.
 Schmidt, P. G., Jr. Granite Falls
 Schmidt, R. F. Alden
 Schmidt, W. R. Minneapolis
 Schmidtke, R. L. Saint Paul

† Schmitt, S. C. El Cajon, Calif.
 Schmitz, A. A. Mankato
 Schneek, Jack L. Waukesha, Wis.
 † Schmitz, Everett J. Seattle, Wash.
 Schmitz, G. P. Little Falls
 Schneider, L. E. Duluth
 Schneider, P. J. Adams
 † Schneider, Robert A. N. Y.
 Schnell, F. S. Litchfield
 Schnugg, Francis J. Rochester
 Schoch, R. B. Saint Paul
 Schoenberger, P. B. Perham
 † Scholpp, O. W. Hutchinson
 Scholz, D. A. Rochester
 Schons, Edward Saint Paul
 Schottler, C. E. Minneapolis
 † Schroeder, C. H. Pottstown, Pa.
 † Schrockenstein, H. F. Saint Paul
 Schroeder, A. J. Minneapolis
 Schroeppel, J. E. Winthrop
 † Schultz, F. C. Saint Paul
 † Schultz, J. A. Albert Lea
 Schultz, J. H. Minneapolis
 † Schultz, P. J. Minneapolis
 † Schulze, A. G. Saint Paul
 Schumacker, J. W. Robbinsdale
 Schutz, J. W. Anoka
 Schutz, E. S. Mountain Lake
 Schutz, John C. Eden Valley
 Schwartz, E. R. Minneapolis
 Schwartz, V. J. Minneapolis
 † Schwarz, Bert E. Rochester
 † Schweiger, T. R. Hibbing
 Schweinfurth, J. D. Rochester
 Schweinfurth, J. P. Wichita, Kan.
 † Schwyzer, Arnold Ah-Gwah-Ching
 Schwyzer, Marguerite Saint Paul
 Schwyzer, H. C. Saint Paul
 Scott, E. E. Saint Paul
 Scott, H. G. Minneapolis
 Scudamore, H. H. Rochester
 † Seaberg, John A. Minneapolis
 Seagle, J. B. Rochester
 Seashore, R. T. Duluth
 Seery, T. M. Austin
 † Segal, M. A. Minneapolis
 † Seham, Max Minneapolis
 Seifert, M. H. Excelsior
 Seifert, O. J. New Ulm
 Seitz, S. B. Barnesville
 Sekhon, M. S. Saint Paul
 Seldon, T. H. Rochester
 † Seljeskog, S. R. Minneapolis
 Sellers, G. K. Dassel
 Sells, Richard S. Saint Paul
 Selmo, J. D. Norwood
 Semsch, R. D. Minneapolis
 † Senkler, G. E. Saint Paul
 † Senn, E. W. Owatonna
 Sether, A. F. Ruthton
 Setzer, H. J. Saint Paul
 Shandorf, J. F. Minneapolis
 Shannon, W. R. Saint Paul
 Shaperman, Eva P. Minneapolis
 Shapiro, S. K. Minneapolis
 Shaver, Ward Fergus Falls
 Shaw, H. A. Minneapolis
 Shea, Andrew W. Minneapolis
 Sheedy, C. L. Austin
 † Shellman, J. L. Pacific Palisades, Cal.
 Sheppard, C. G. Hutchinson
 Sher, D. A. Virginia
 Sher, Lewis Minneapolis
 Sherman, A. G. Albert Lea
 Sherman, C. H. Bayport
 Sherman, C. L. Luverne
 Sherman, L. F. Minneapolis
 Sherman, R. V. Red Wing
 † Sherwood, G. E. Kimball
 Shick, R. M. Rochester
 Shocket, Everett Rochester
 Sholl, P. R. Rochester
 Short, Jacob Saint Paul
 Shronts, J. F. Minneapolis
 Siegel, Clarence Saint Paul
 Siegel, J. S. Virginia
 † Siegel, S. C. Saint Paul
 Siegmann, W. C. Minneapolis
 Siekert, R. G. Rochester
 Sikkema, Stella H. Minneapolis
 † Silver, Arthur W. Rochester
 Silver, J. D. Minneapolis
 Simson, Carl Barnesville
 Simon, Howard B. Saint Paul
 Simon, T. R. Saint Cloud
 Simons, B. H. Chaska
 Simons, E. J. Saint Paul
 † Simons, J. H. Minneapolis
 Simons, L. T. Saint Paul
 Simons, W. H. Rochester
 Simonson, D. B. Minneapolis
 Simonson, K. MacL. Rochester
 † Simpson, E. D. Minneapolis

ALPHABETICAL ROSTER

Sinamark, Andrew.....Hibbing
 Singer, B. J.....Saint Paul
 Sinykin, M. B.....Minneapolis
 Siperstein, D. M.....Minneapolis
 Siak, H. E.....Saint Cloud
 Sisler, C. E.....Grand Rapids
 Sivertsen, Andrew.....Minneapolis
 Sivertsen, Ivar.....Minneapolis
 Sjoding, J. D.....Mankato
 Sjoström, L. E.....Saint Peter
 Skafie, William F.....Little Falls
 Skaug, H. M.....Rochester
 Skinner, Abbott.....Saint Paul
 Skinner, H. O.....Saint Paul
 Skjold, A. C.....Minneapolis
 Skogerboe, R. B.....Karlstad
 Slater, S. A.....Worthington
 Slocumb, C. H.....Rochester
 Smiley, J. T.....Minneapolis
 Smisek, E. A.....Saint Paul
 Smisek, F. M. E.....Minneapolis
 Smith, Adam M.....Minneapolis
 Smith, Archie M.....Minneapolis
 Smith, B. A., Jr.....Minneapolis
 Smith, Ballard F.....Rochester
 Smith, C. M.....Duluth
 Smith, Clyde.....Saint Paul
 Smith, D. V.....Blue Earth
 Smith, Fredk. L.....Rochester
 Smith, George R.....Hutchinson
 Smith, Graham G.....Minneapolis
 Smith, Harry.....Lake Crystal
 Smith, H. L.....Minneapolis
 Smith, H. K.....Minneapolis
 Smith, Leon G.....Montevideo
 Smith, Lloyd A.....Tyler
 Smith, Lucian A.....Rochester
 Smith, M. P.....Rochester
 Smith, Margaret I.....Robbinsdale
 Smith, Marie A.....Minneapolis
 Smith, Myron W.....Red Wing
 Smith, N. R.....Minneapolis
 Smith, Newton W.....Rochester
 Smith, Paul M.....Lake Crystal
 Smith, T. S.....Minneapolis
 Smith, V. D. E.....Saint Paul
 Smith, W. R.....Grand Marais
 Smith, Wm. T.....Minneapolis
 Smorazczok, Mitrofan.....Monticello
 Smyth, J. J.....Lester Prairie
 Snyder, C. D.....Kiester
 Snyder, G. W.....Saint Paul
 Snyder, O. E.....Ely
 Soderlind, R. T.....Minneapolis
 Sogge, L. R.....Windom
 Sohler, O. L.....Saint Paul
 Sohmer, A. E. J.....Mankato
 Solhaug, S. B.....Minneapolis
 Solsem, F. N. S.....Spicer
 Solvason, H. M.....Minneapolis
 Sommers, Ben.....Saint Paul
 Sonnessyn, N. N.....Le Sueur
 Sorem, M. B.....Saint Paul
 Sorum, F. T.....Jasper
 Soucheray, E. H.....Saint Paul
 Soule, E. H.....Rochester
 Souster, B. B.....Saint Paul
 Sowada, E. J.....Saint Paul
 Spain, W. Thomas.....New Brunswick, N. Y.
 Spang, A. J.....Duluth
 Spang, J. S.....Duluth
 Spang, William M.....Duluth
 Spano, J. P.....Minneapolis
 Spear, H. C.....Houston, Texas
 Spink, W. W.....Minneapolis
 Sponsel, Kenath.....Minneapolis
 Sprafka, J. L.....Saint Paul
 Sprafka, J. M.....Saint Paul
 Spratt, C. N.....Minneapolis
 Spurzem, R. J.....Anoka
 Stadem, C. J.....Twin Valley
 Stahler, P. A.....Jordan
 Stahn, Louis H.....Anoka
 Stahr, A. C.....Hopkins
 Stam, John.....Worthington
 Stanford, C. E.....Minneapolis
 Stanley, C. R.....Worthington
 Starekow, M. D.....Thief River Falls
 State, David.....Phoenix, Ariz.
 Staub, H. P.....Minneapolis
 Stauffer, Maurice H.....Rochester
 Steffens, L. A.....Red Wing
 Stein, R. J.....Pierz
 Steinberg, C. L.....Saint Paul
 Steiner, J. W.....Winona
 Steiner, L. E.....Albert Lea
 Steinhilber, R. M.....Rochester
 Stelter, L. A.....Minneapolis
 Stenmarud, H. L.....Alexandria
 Stennes, J. L.....Minneapolis
 Sterner, D. C.....Saint Paul
 Sterner, E. G.....Saint Paul

Sterner, E. R.....Saint Paul
 Sterner, J. J.....Saint Paul
 Sterrie, Normana.....Worthington
 Stevens, Grant M.....Rochester
 Stevenson, B. M.....Fulda
 Stevenson, F. W.....Faribault
 Stewart, Alexander.....Saint Paul
 Stewart, D. E.....Crookston
 Stewart, M. J.....Minneapolis
 Stewart, R. L.....Minneapolis
 Stickney, J. M.....Rochester
 Stiegler, F. S.....Saint Paul
 Stillwell, G. K.....Minneapolis
 Stillwell, W. C.....Mankato
 Stillwell, G. G.....Rochester
 Stoekmann, Arthur E.....St. Peter
 Stoesser, A. V.....Minneapolis
 Stolpestad, A. H.....Saint Paul
 Stolpestad, H. L.....Saint Paul
 Stoltz, Robert G.....Minneapolis
 Stomel, Joseph.....Los Angeles, Calif.
 Stone, N. F.....Chicago, Ill.
 Stone, S. P.....Minneapolis
 Storsteen, K. A.....Rochester
 Stoy, R. A.....Little Falls
 Strachuer, A. C.....Minneapolis
 Strandiord, N. M.....N. Y., N. Y.
 Stransky, T. W.....Owatonna
 Strate, G. E.....Saint Paul
 Strathern, C. S.....Saint Peter
 Strathern, F. P.....Saint Peter
 Strathern, M. L.....Gilbert
 Stratte, A. K.....Pine City
 Stratte, H. C.....Windom
 Straus, M. L.....Saint Paul
 Strauss, E. C.....Duluth
 Street, Bernard.....Northfield
 Strem, E. L.....Saint Paul
 Strewler, G. J.....Duluth
 Strickler, J. H.....Minneapolis
 Strobel, W. G.....Duluth
 Stroebel, C. F., Jr.....Rochester
 Strom, G. W.....Minneapolis
 Stromgren, D. T.....Minneapolis
 Stromme, W. B.....Minneapolis
 Strunk, C. A.....Minneapolis
 Struthers, Alfred M.....Rochester
 Studer, D. J.....Faribault
 Stuermer, Harry.....Minneapolis
 Stuhler, L. G.....Rochester
 Stuhr, J. W.....Stillwater
 Sturges, Robert L.....Minneapolis
 Sturley, R. F.....Saint Paul
 Subby, Walter.....Minneapolis
 Sukov, Marv.....Rochester
 Sutherland, H. N.....Ely
 Sutherland, W. H.....Benson
 Sutton, H. R.....Hoffman
 Svien, H. J.....Rochester
 Swain, F. M.....Saint Paul
 Swanson, J. A.....Saint Paul
 Swanson, L. L.....West Saint Paul
 Swanson, R. E.....Minneapolis
 Swedberg, W. A.....Duluth
 Swedenburg, P. A.....Glenwood
 Sweetser, H. B.....Minneapolis
 Sweetser, T. H.....Minneapolis
 Sweitzer, S. E.....Minneapolis
 Swendseen, C. G.....Minneapolis
 Swenson, I. J.....Saint Paul
 Swensen, R. G.....North Branch
 Swenson, A. O.....Duluth
 Swenson, Donald B.....St. Paul
 Swenson, O. L.....Waseca
 Symmonds, Richard E.....Rochester
 Syverson, Jerome.....Minneapolis
 Tangen, G. M.....Minneapolis
 Tanquist, Edwin J.....Alexandria
 Tarantino, Jos. C.....Rochester
 Taub, Robert G.....Rochester
 Taylor, D. E.....San Diego, Calif.
 Taylor, Edwin A.....Rochester
 Taylor, Gloria A.....San Diego, Calif.
 Taylor, J. H.....Minneapolis
 Taylor, L. M.....Rochester
 Teich, K. W.....Duluth
 Teisberg, J. E.....Saint Paul
 Tenner, R. J.....Minneapolis
 Terrell, B. I.....Nopeming
 Terry, W. S.....Saint Paul
 Tesch, G. H.....Elk River
 Tetlie, J. P.....Camp Carson, Colo.
 Thabes, I. A., Sr.....Brainerd
 Thabes, I. A., Jr.....Brainerd
 Thayer, E. A.....Fairmont
 Thelen, E. P.....Bethesda, Md.
 Thielen, R. D.....Saint Michael
 Thiem, Chester E.....Hibbing
 Thomas, G. E.....Minneapolis
 Thomas, W. H.....Howard Lake
 Thomes, A. B.....Minneapolis
 Thompson, C. O.....Hendricks
 Thompson, F. A.....Saint Paul

Thompson, G. J.....Rochester
 Thompson, H. B.....Saint Cloud
 Thompson, O. H., Jr.....Rochester
 Thompson, W. H.....Minneapolis
 Thomson, J. M.....Austin
 Thoreson, M. C. Bern.....South Saint Paul
 Thorsen, D. S.....Minneapolis
 Thorson, S. V.....Minneapolis
 Thyssell, Desmond M.....Minneapolis
 Thyssell, Fred A.....Moorhead
 Thyssell, Harold.....Crookston
 Thyssell, V. D.....Hawley
 Tift, C. R.....Minneapolis
 Tihen, E. N.....Saint Paul
 Tillisch, J. C.....Camp Stoneman, Calif.
 Tingdale, A. C.....Minneapolis
 Tingdale, Carlyle.....Hibbing
 Tinkham, R. G.....Minneapolis
 Titrud, L. A.....Minneapolis
 Tobin, John D.....Minneapolis
 Todd, John W.....Rochester
 Todd, Romana L.....Minneapolis
 Tomhave, W. G.....Hibbing
 Tompkins, R. G.....Rochester
 Tongen, Lyle A.....Saint Paul
 Tosseland, N. E.....Duluth
 Trach, B. B.....Minneapolis
 Tracht, R. R.....Saint Paul
 Traeger, Carl A.....Faribault
 Travis, James S.....Saint Paul
 Traxler, J. F.....Henderson
 Tregilas, H. R.....South Saint Paul
 Troost, H. B.....Mankato
 Trow, James E.....Minneapolis
 Trow, Wm. H.....Minneapolis
 Trueman, H. S.....Minneapolis
 Truesdale, C. W.....Glencoe
 Tuerk, Milton.....Rochester
 Tudor, R. B.....Minneapolis
 Tunstead, H. J.....Minneapolis
 Tuohy, E. L.....Duluth
 Turbak, C. E.....Canby
 Turnadiff, D. D.....Saint Paul
 Tweedy, Geo. J.....Winona
 Tweedy, J. A.....Winona
 Twiggs, L. E.....Austin
 Twomey, J. E.....Minneapolis
 Ude, Walter H.....Minneapolis
 Uhley, C. G.....Crookston
 Uhllein, Alfred.....Rochester
 Ulrich, Henry L.....Minneapolis
 Ulery, Richard M.....Rochester
 Ulvestad, H. S.....Minneapolis
 Undine, C. A.....Minneapolis
 Urberg, S. E.....Duluth
 Utne, J. R.....Northfield
 Utz, David C.....Rochester
 Vadheim, A. L.....Tyler
 Valentine, W. H.....Tracy
 Van Bergen, F. H.....Minneapolis
 Van Cleve, H. P., Jr.....Austin
 Vandervorst, J. W.....Bemidji
 Van Herik, Martin.....Rochester
 Van Meier, Henry.....Stillwater
 Van Rooy, G. T.....Thief River Falls
 Van Ryzin, D. J.....Duluth
 Van Valkenberg, J. D.....New York, N. Y.
 Van Fleet, Mary E.....Rochester
 Varco, R. L.....Saint Paul
 Vaughan, V. M.....Truman
 Vaughn, C. G.....St. Leonard Wood, Mo.
 Vaughn, L. D.....Rochester
 Veirs, D. M.....Saint Paul
 Veirs, Ruby J. S.....Saint Paul
 Venables, A. E.....Saint Paul
 Veranth, L. A.....Saint Cloud
 Verby, J. E., Jr.....Litchfield
 Vezina, J. C.....Mapleton
 Vik, Arthur E.....Minneapolis
 Vik, Melvin.....Omaha
 Virnig, Hildegard J.....Rochester
 Virnig, Mark P.....Wells
 Virnig, Richard P.....Wells
 Vogel, H. A. L.....New Ulm
 Vollmer, F. J.....Winona
 Von Drasek, J.....Mankato
 Waas, C. W.....Saint Paul
 Wadd, C. T.....Janesville
 Wagener, H. P.....Rochester
 Wagoner, James M.....Rochester
 Wagner, N. W.....Graceville
 Wahlquist, H. F.....Minneapolis
 Wakefield, E. G.....Rochester
 Wakim, K. G.....Rochester
 Walder, H. J.....Duluth
 Waldron, C. W.....Minneapolis
 Walfred, K. A.....Saint Cloud

ALPHABETICAL ROSTER

† Walker, A. E. Duluth
Walker, Arthur E. Saint Paul
Wall, C. R. Minneapolis
Wallace, M. O. Duluth
† Waller, J. D. Pine City
† Walsh, Edw. F. Saint Paul
Walsh, F. M. Minneapolis
Walsh, W. T. Minneapolis
Walter, C. Wm. Saint Paul
Walter, F. H. International Falls
Walters, Waltman. Rochester
Wandke, O. E. Fairmont
† Wang, Jun-Chuan
Wangensteen, O. H. Ft. Sam Houston, Tex.
† Ward, Bert B. Rochester
Ward, Louis E. Rochester
Ward, Percy A. Minneapolis
† Ward, Peter D. Saint Paul
Warner, James J. Perham
Warren, C. A. Saint Paul
Wasmund, C. W. Red Wing
Wasson, L. F. Alexandria
Watkins, C. H. Rochester
† Watkins, I. A. Windom
Watson, A. M. Royalton
Watson, C. G. Minneapolis
Watson, C. J. Minneapolis
Watson, Eleanor J. Rochester
† Watson, J. R. Rochester
Watson, P. Theo. Saint Paul
Watson, Percy T. Northfield
Watson, R. M. Morris
Watson, S. Wm. Royalton
Watson, Wm. H. A. Saint Paul
Watz, Wm. J. Newport
Watz, C. E. Saint Paul
† Waud, R. E. Fort Ora, Calif.
Waugh, J. M. Rochester
† Weaver, M. M.
Weaver, P. H. Vancouver, B. C., Canada
Webb, E. A. Faribault
Webb, James H. Rochester
Webb, R. C. Minneapolis
Webber, F. L. Saint Paul
Webber, R. J. Hopkins
Weber, Harry Rochester
Wober, Lowell. Minneapolis
Weed, L. A. Rochester
† Wehr, M. B. Long Island, N. Y.
Weir, J. F. Rochester
Weis, B. A. Saint Paul
Weisberg, Maurice. Saint Paul
Weisberg, R. J. Minneapolis
Weiss, Carl A. Hastings
Welch, J. S. Rochester
Wellborn, W. H. Rochester
Wellman, T. G. Clinton, Ia.
Wellman, Wm. E. Rochester
Wellner, T. O. Rochester
Welles, H. J. Minneapolis
Wells, A. H. Duluth
Wells, W. B. Jackson
Wendland, J. P. Minneapolis
Wente, H. A. Rochester
† Wentworth, A. J. Mankato
Wentzel, James D. Montoursville, Pa.
Wenzel, G. P. Saint Paul

† Werner, George Minneapolis
Weslowski, S. P. Saint Paul
† West, Catherine C. Minneapolis
Westby, Magnus Madison
Westby, N. M. Madison
† Westerman, A. E. Montgomery
Westerman, F. C. Montgomery
Westover, D. E. Saint Paul
Westrup, J. E. Lanesboro
† Wethall, A. G. Minneapolis
Wetherby, M. Minneapolis
† Wetzel, E. V. Saint Paul
† Weyhrauch, R. A. Phoenix, Ariz.
† Wheeler, D. W. Duluth
Wheeler, G. S. Roseau
† Wheeler, M. W. Lake Elmo
Wheeler, R. W. Minneapolis
White, Asher A. Minneapolis
White, S. Marx. Minneapolis
† White, Roy A. New Orleans, La.
White, W. D. Minneapolis
Whitesell, L. A. Minneapolis
Whitson, S. A. Albert Lea
Whittemore, D. D. Bemidji
Widen, W. F. Minneapolis
Wierman, Wm. H. Rochester
Wikoff, H. M. Crookston
† Wilcox, A. E. Minneapolis
Wilcox, G. C. St. Peter
† Wilder, K. W. Minneapolis
Wilder, R. L. Minneapolis
† Wilder, Russell M. Bethesda, Md.
† Wilder, R. M., Jr. Minneapolis
Wilken, P. A. Minneapolis
† Wilkinson, George R., Jr. Rochester
† Wilkinson, Stella L. Newport
Wilkowski, R. J. Owatonna
Will, C. B. Bertha
Will, W. W. Bertha
† Willcutt, C. E. Phoenix, Ariz.
† Williams, A. B. Saint Paul
Williams, B. F. P. Duluth
Williams, Chas. Pipestone
Williams, C. K. Saint Paul
Williams, George E. Rochester
Williams, Henry L., Jr. Rochester
Williams, H. O. Lake Crystal
Williams, J. A. Saint Paul
† Williams, L. A. Minneapolis
† Williams, L. B. Germany
† Williams, M. M. Ah-Gwah-Ching
Williams, M. R. Cannon Falls
† Williams, R. V. Rushford
† Williams, Robert Duluth
Williamson, H. A. Heron Lake
Willius, F. A. Rochester
Wilmot, C. A. Litchfield
Wilmot, H. E. Litchfield
Wilson, C. E. Blue Earth
Wilson, F. C. Austin
Wilson, J. A. Saint Paul
Wilson, J. V. Saint Paul
† Wilson, Louis J. Winona
Wilson, R. B. Rochester
Wilson, R. H. Minneapolis
† Wilson, T. W. Great Lakes
Wilson, V. O. Rochester
Wilson, W. E. Northfield
† Wilson, Wm. F. Lake City
† Wiltrout, I. G. Oslo

Winchell, Paul. Minneapolis
† Wineland, R. E. New York
Wingquist, C. G. Crosby
† Winkelmann, Richard K. Rochester
† Winnick, J. B. Saint Paul
Winter, J. A. Duluth
Winteringer, J. R. Rochester
Winther, Nora M. C. Minneapolis
Wipperman, F. F. Minneapolis
† Wise, Fred E., Jr. Rochester
Wisness, O. A. Comfrey
Witham, C. A. Minneapolis
† Wittchow, A. W. Rochester
Wittich, F. W. Minneapolis
Wittrock, L. H. Watkins
Wohlrahe, A. A. Minneapolis
Wohlrahe, A. C. Minneapolis
Wohlrahe, C. F. No. Mankato
Wohlrahe, E. J. Springfield
† Wold, Karl C. Saint Paul
Wolf, A. H. Minneapolis
Wolff, Helen B. Hamden, Conn.
Wolff, H. J. Saint Paul
Wolff, John M. Rochester
Wolkoff, H. J. Saint Paul
Wollaege, Eric Rochester
Wolstan, S. D. Minneota
Wolter, Frederick H. Minneapolis
Woltjen, M. J. Rushford
Woltman, H. M. F. Rochester
† Wood, Harry G. Rochester
Woolner, L. B. Rochester
Word, H. L. Saint Paul
Workman, W. G. Tracy
† Wray, Wm. E. Fergus Falls
Wright, R. R. Austin
Wright, S. M. Rochester
Wright, T. D. Minneapolis
Wright, W. S. Minneapolis
Wright, Wm. S. Minneapolis
† Wuest, John H., Jr. Rochester
Wurdemann, Alma L.
Wyatt, O. S. White Bear Lake
Wynne, H. M. N. Minneapolis
Yaeger, W. W. Marshall
† Ylitalo, W. H. Rochester
Ylvisaker, R. S. Minneapolis
Yoerg, O. W. Minneapolis
Young, H. H. Rochester
Young, T. O. Duluth
Younger, L. L. Winona
Youngren, E. R. Saint Paul
Zachman, A. H. Melrose
Zachman, L. L. Saint Paul
Zahrendt, O. Lewis. Minneapolis
Zaworski, L. A. Minneapolis
Zeigler, C. W. Pine River
† Zeller, W. W. Philadelphia, Pa.
Zemke, E. E. Fairmont
Ziegler, Robert G. Welcome
Zierold, A. A. Minneapolis
Zimmerman, H. B. Saint Paul
Zinter, F. A. Minneapolis
Ziskin, Thos. Minneapolis
† Zupanc, Edward.
San Francisco, Calif.

Minnesota Academy of Medicine

Meeting of November 12, 1952

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, November 12, 1952. Dinner was served at 7 o'clock and the meeting was called to order at 8:10 p.m. by the President, Dr. O. H. Wangenstein.

There were fifty-six members and five guests present.

Minutes of the October meeting were read and approved.

The Secretary reported that the Executive Committee, at the request of the applicant, had approved the transfer of the name of Dr. Arthur Ide, from the Active to the Senior Membership list. Upon ballot, this was approved by the members present.

Upon ballot, the following men were elected as candidates for membership in the Academy:

Minneapolis.....Dr. Ejvind Fenger
Saint Paul.....Dr. Lawrence Hilger
 Dr. Burtis Mears
 Dr. Ben Sommers
Austin.....Dr. David P. Anderson
Red Wing.....Dr. Ray Hedin

The scientific program followed.

Dr. C. W. Lillehei, University of Minnesota, by invitation, gave the paper of the evening, entitled "The Effect of Left to Right Circulatory Shunts upon Susceptibility to Infection."

The meeting was adjourned.

WALLACE P. RITCHIE, M.D., Secretary

Meeting of December 10, 1952

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, December 10, 1952. The dinner was served at 7 o'clock and the meeting was called to order at 8:10 p.m. by the President, Dr. O. H. Wangenstein.

There were fifty-five members and two guests present.

Minutes of the November meeting were read and approved.

Dr. Wangenstein said he felt some sort of commendation to Dr. Wallace Ritchie as Secretary, was in order, and he also wanted to thank Dr. Thomas Lowry for the fine work he had done as Chairman of the Program Committee.

The following members were elected as Officers for the year 1953.

President.....Dr. E. A. Regnier, Minneapolis
Vice President.....Dr. Charles N. Hensel, St. Paul
Sec'y-Treasurer...Dr. Robert E. Priest, Minneapolis
The scientific program followed.

Dr. Wendell Hall, University of Minnesota, by invitation, gave a talk on "Human Brucellosis in Minnesota." (See Page 460)

DISCUSSION

DR. WESLEY W. SPINK, Minneapolis: I suppose that in the past many papers of historical interest and importance have been presented before this Academy, and the one that Dr. Hall has presented tonight should be included in this category. I doubt whether many individuals in this country can bring together thirty-five well-studied, bacteriologic-proved cases of human brucellosis. It takes a long time to accumulate such an experience. Over a period of fifteen years, my associates and I, including Dr. Hall, have studied 110 culturally proved cases. This does not include an equal number of cases with undoubted brucellosis having epidemiologic, clinical and serologic evidence of active disease. All these active cases have been screened from several hundred cases of suspected brucellosis.

There are several aspects of this disease that are of historical interest, as far as the state of Minnesota is concerned, and one in particular that relates to the University of Minnesota. Minnesota has long been a leader in the efforts to eradicate brucellosis from farm animals. Participants in this activity have included individuals in the Division of Veterinary Science in the University, such as the late Dr. C. P. Fitch, Dr. W. L. Boyd, Dr. H. C. Kernkamp and Dr. M. Roepke; members of the Laboratories of the State Board of Health, such as Dr. O. McDaniel, Dr. L. Heathman Barr, Dr. D. Fleming and Dr. H. Bauer; Dr. Randolph West of the Minnesota Livestock Sanitary Board, and Dr. Fred Driver of the Bureau of Animal Industry in the U. S. Department of Agriculture.

Although Bang had established the etiology of contagious abortion in cattle in 1897, and Bruce had isolated the causative agent of Malta fever from humans in 1887, the first human case due to *Br. abortus* was not established until 1924. But a former Professor at the University of Minnesota came very near establishing the fact that human beings could contract brucellosis from cattle a decade before this was proved. A young bacteriologist trained in serologic techniques in Copenhagen became interested in the complement-fixation test for brucellosis, and in 1912 published a paper from the University of Wisconsin showing that of 76 head of cattle, 30 had serologic evidence of brucellosis. Furthermore, he isolated *Br. abortus* from bovine fetal material, the second man in the United States to do so up to that time. That man was Dr. Winfred Larson, late Professor and Chairman of the Department of Bacteriology at the University of Minnesota. Dr. Larson moved on to Minnesota from Wisconsin and in 1913, he published another significant paper with Dr. J. P. Sedgwick, Chairman of the Department of Pediatrics. He demonstrated complement-fixing antibodies and agglutinins for brucella in 17 per cent of the sera from over 400 infants and children. In the discussion of their paper they postulated about the significance of these brucella antibodies, but they did not take the final step and attempt the isolation of brucella organisms from human beings. They concluded, though, that further investigations were necessary.

The impetus for the control and eradication of animal brucellosis in Minnesota has stemmed from two funda-

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mental facts. First, the disease is an economic liability to the farmer and to the livestock breeder because it causes abortions and because a diseased cow is a poor milk producer. Second, these animals are the reservoir for the human disease.

Prior to World War II, efforts in Minnesota to eradicate bovine brucellosis were attended with considerable success. If the work had progressed uninterrupted, by today brucellosis would be much less of a problem. But due to the war, activities centering around a control program abated, and there was an associated increase in the incidence of animal and human brucellosis. But since the conclusion of World War II the eradication program in Minnesota is underway again, and other states are also engaging in aggressive programs. These increased efforts in other states are due to two recent developments. One relates to the announcement of the Chicago Board of Health that after January 1, 1955, all milk and milk products sold in that city for human consumption shall come from herds of cattle free from Bang's disease. This edict struck particularly hard at Wisconsin, where the dairy industry is the backbone of the state's economy. The State Legislature became interested, and appropriated a large sum of money to investigate the disease in cattle. Recent figures indicate that about 30 per cent of the herds of cattle in Wisconsin have animals with Bang's disease. The other development that is speeding up eradication programs is the decision of the U. S. Public Health Service to revise the milk code so that all milk and milk products sold for human use shall originate from herds that are following either Plan A or Plan B eradication programs. Plan A calls for the serologic testing of all cattle in a herd, and then the slaughtering of all positive reactors. Plan B means the testing of cattle, but deferring slaughtering of the reactors, and vaccinating the calves with brucella antigen. Both plans are in effect in areas in Minnesota, and I am sure that the State Legislature will take an increased interest in the efforts of the farmers and livestock producers to eliminate this brucellosis. At the present time, only three states have been accredited as free of brucellosis—Maine, New Hampshire and North Carolina.

Minnesota has been a most progressive state in the efforts to eliminate brucellosis. The pattern of the program has been adopted by several other states. I believe that since World War II the incidence of the bovine brucellosis has dropped because the attack rate in human beings is declining. This decline is not entirely due to the compulsory state law requiring the pasteurization of all milk sold for human use.

DR. THEODORE SWEETSER, Minneapolis: I think Dr. Spink or Dr. Hall might mention some of the aspects of the situation in Rochester or in that area. I think brucellosis has been part of the problem there in relation to the distribution of milk to other states.

DR. SPINK: In answer to Dr. Sweetser's question, I am simply saying—I do not know. I do not believe that the incidence of bovine brucellosis in Minnesota is as great as in Wisconsin. Iowa poses a considerable problem, because the disease there is most prevalent in swine, and most of the human cases are derived from this source. But Iowa is taking active steps to eliminate the disease in hogs.

DR. THOMAS LOWRY, Minneapolis: Ten or twelve years ago brucellosis was a very fashionable diagnosis, so to speak. Many patients came in with lymphadenopathy which they themselves had noted and which had caused a diagnosis of brucellosis to be attached to them on quite uncertain grounds, without adequate culture studies. At that time a great deal was being done, at least in some parts of the country, with vaccine therapy. Immediately, therefore, the patient who was considered

to have brucellosis was apt to be given vaccine and developed a low agglutination titer against brucella organisms.

The only point in referring to it at all is that in my experience that type of individual has practically dropped out of sight. The patient who develops such a false titer is rarely seen at present in this vicinity as compared with a few years ago. I think it is largely through the efforts of Dr. Spink and Dr. Hall, who have insisted on adequate bacteriologic data before any sort of treatment is given, that this change has come about.

DR. E. T. EVANS, Minneapolis: As mentioned, brucellosis may produce spondylitis. The first group is, of course, the acute spondylitic reaction. I think Dr. Wangenstein will recall a patient we saw fifteen or sixteen years ago at the University Hospital in which the acute process was present for several months and finally quieted down with a diagnosis made only on differential exclusion. A second group is the development of a chronic subacute spondylitis without significant changes in the early cases and with symptoms that again must be diagnosed by exclusion. The third group is the chronic spondylitis in which the diagnosis is made largely on history and the associated finding of the so-called "parrot-beak" changes in the region of the intervertebral space. These patients may be noted on routine x-rays, and the only history one can find is that in years past the patient had a period of considerable localized backache.

As to differential diagnosis, two serious problems present: First, acute osteomyelitis. This is not an osteomyelitis but rather an intervertebral space involvement with secondary osteitis producing the eventual "parrot-beak" finding. They are essentially intervertebral disc in nature with secondary localized osteitis or periostitis. The other groups that are difficult to differentiate are, of course, the tuberculous cases. Inasmuch as most of these patients are farmers, we frequently find a positive Mantoux test. Tuberculosis, however, is a more chronic disease, seldom associated with as much pain as is present in the acute spondylitis cases seen with brucellosis. Careful x-ray studies, the presence of a perivertebral abscess, or the localized finding of destructive osteitis within the body of the vertebra or adjacent to the intervertebral space in planograms, should clinch the diagnosis.

Now that we are hearing so much about acute disc prolapse, degenerative disc with acute symptoms and functional low back complaints, secondary to disc degeneration, I think it is well to remember that if you have an acute disc syndrome, brucellosis as a cause should not be overlooked. It is my understanding that at least two patients have been operated upon for acute disc lesions, which proved to be brucellosis.

DR. SPINK: The most common complication of brucellosis is spondylitis. In Minnesota, not more than 5 to 10 per cent of all the cases develop spondylitis. But in some Mediterranean areas that I have visited recently, more than half of the hospitalized patients have had this complication. It is quite dramatic what rest in bed and antibiotic therapy will do for these patients. Any patient, particularly a farmer, who has received a diagnosis of a slipped or herniated intervertebral disc, should be screened serologically for brucellosis.

DR. HALL, closing: Dr. Hansen has asked about the eye symptoms in brucellosis. Three-fourths of the patients had headaches and these characteristically were frontal headaches referred to the occiput and down the back of the neck. There were no patients in this series who had any objective evidence of infection in the ears or eyes, and I do not recall any who had a history of

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eye disease. I can't recall seeing any patients in whom the disease was proved by cultures who had iritis or iridocyclitis; some with positive skin tests and low titers of agglutinins who had received brucella vaccine, had flare-ups of recurrent iritis. I certainly feel that iritis is uncommon in the disease and that probably brucellosis is a rare cause of the iridocyclitis.

Dr. Wangenstein asked about infection of the udder or mastitis. I am not a veterinarian but, as I understand it, Garget or clinical mastitis in cows is usually streptococcal in origin and not caused by brucella. Mas-

titis is very uncommon in the human females with brucellosis.

I would like to say something else about the differentiation from tuberculosis. As far as spondylitis is concerned, brucella spondylitis treated with rest and chemotherapy is followed by improvement, which is more rapid than seen in Pott's disease. Furthermore, pulmonary lesions are rare in brucellosis and common in tuberculosis.

The meeting was adjourned.

WALLACE P. RITCHIE, M.D., *Secretary*

Meeting of January 14, 1953

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, January 14, 1953. Dinner was served at 7:00 p.m., and the meeting was called to order at 8:10 p.m. by Dr. Moses Barron who had been asked to preside, this being the annual meeting at which the address of the Retiring President is given.

There were forty-eight members and four guests present.

Dr. Barron announced the names of the past presidents who were present—Drs. H. L. Ulrich, J. E. Hynes, E. M.

Jones, R. T. La Vake, C. B. Drake, James A. Johnson, H. B. Zimmermann, A. G. Schulze, E. M. Hammes, T. A. Peppard, William Hanson, W. H. Hengstler, and O. H. Wangenstein.

No business was transacted at this meeting.

Owen H. Wangenstein, University of Minnesota, gave his address as Retiring President, entitled "A Look Backward." (See page 471).

There was no discussion.

The meeting was adjourned.

ROBERT E. PRIEST, M.D.

WHO IS THE "POWERFUL AMA LOBBY"?

You are, Doctor. This fact was brought out in a recent talk in Pittsburgh by Dr. Frank Wilson, director of the American Medical Association office in Washington. The function of this office is frequently misunderstood, even by members of the medical profession. As a matter of fact, the AMA has only two registered lobbyists in Washington—Dr. Wilson and one of his associates. They are registered only for protection of the AMA, and not because of the amount of lobbying they do.

The Washington office of the AMA is best considered as an information center, both for members of the profession and for members of Congress and government agencies. It was first established in 1943, after necessary legislation was passed by the House of Delegates of the AMA. At present, it has a staff of fifteen, including three physicians, two editors, a lawyer, a business manager and his assistant, and an executive assistant. It certainly doesn't sound like the huge "pressure group" that some columnists write about, does it?

It publishes three different types of newsletters. The first and basic publication is *The Bulletin*. This lists by number and name all legislation introduced into Congress that has medical significance. In addition, a brief abstract of the bill is given, but there is no editorializing. In other words, the official attitude of the AMA toward that specific piece of legislation is not given. The *Bulletin* is factual information and nothing else.

The second publication is *Capitol Clinics*, which is an informal newsletter on happenings in Federal agencies that would be of interest to the medical profession. The third publication is *Special Bulletins*, which is published more irregularly, and gives factual reports on specific agencies or policies. After the *Special Bulletins* is prepared and before it is published, the Washington office has it checked by the head of the agency or policy committee to make sure that the facts are correct.

Now, about this lobby system. Dr. Wilson and his associates never tell a senator or congressman how to vote. Their function is merely to inform the legislators on health problems. For example, a bill may be intro-

duced on the subject of multiple sclerosis. Probably Senator Bloop from Siwash Falls, Idaho, has never even heard of the disease, let alone know what his attitude should be toward this piece of legislation. So he would call the Washington office and ask for information on "this multiple whatchamacallit," and be given a definition in lay terms together with some facts on the incidence, methods of treatment, and any other pertinent information. With this, he can form some intelligent attitude and decide whether he will be for it or against it. Argument for and against medical legislation is presented to congressmen, but under no circumstances is pressure applied.

The "pressure" is applied by the average physician at home, which means you, Doctor. When you write, wire, or call your congressman, you are making your wants known to him as far as medical legislation is concerned. A good representative in Washington desires these letters or telegrams because they let him know how the people at home feel about a particular bill. Congressmen respect the opinion of physicians in spite of the fact that as a group they are number poor in voting strength. Our representatives respect the influence of physicians in the community, and they will listen to you if your arguments are sound and your attitude is reasonable. If you want information about a piece of legislation before you write your senator or representative, the Washington office of the AMA will be happy to send it to you also as one of their services.

How much does it cost to run the Washington office? Hold onto your hats, because the "huge slush fund of the AMA lobby" amounts to 3 per cent of the budget of the American Medical Association, or about \$200,000 annually. If you figure 15 salaries, office expenses, the cost of printing and paper, and miscellaneous items of overhead, there certainly isn't enough left to influence congressmen on one piece of legislation, let alone the dozens of bills presented annually.

So the next time one of your friends sounds off on the AMA lobby, here are a few facts you can hand him hot off the griddle. You, Doctor, are the American Medical Association and all its component parts.—*Bulletin of Allegheny County Medical Society.*

◆ Reports and Announcements ◆

FAMILY DOCTORS' DAY

The second Family Doctors' Day will be held on Wednesday, June 3, at the University of Minnesota Hospitals. Once again, an informal program, featuring topics of general interest, has been planned. All physicians are cordially invited to attend this program which will be presented by the Department of Surgery. The day's activities will include the following:

- 11:00 a.m. Clinical-Pathological Conference; Todd Amphitheater, University Hospitals
- 12:00 noon Luncheon with Department of Surgery Staff; Powell Hall Recreation Lounge
- 2:00 p.m. Conference on Common Problems in General Surgery; Heart Hospital Theater, University Hospitals

PHYSICIANS NEEDED FOR THE BUREAU OF INDIAN AFFAIRS

Doctors are needed for service in The Bureau of Indian Affairs on reservations west of the Mississippi and in Alaska. A limited number of positions in the Fish and Wildlife Service are located in The Pribilof Islands off the Alaskan mainland. Applicants for the position of Medical Officer must be graduates of medical schools of recognized standing and will receive compensation ranging from \$5,940 to \$10,800 depending on qualifications and experience. Forms may be obtained from the U. S. Civil Service regional office at the Post Office and Custom House Building in Saint Paul.

HEART DISEASE RESEARCH GRANTS

Grants and fellowships in the field of heart disease research totalling more than \$810,000 have been announced by the Life Insurance Medical Research Fund, an organization of 145 U. S. and Canadian life insurance companies. The new awards raise to more than 5.5 million dollars the money which has been contributed to research by the Fund since it was organized late in 1945.

Today's awards include \$664,386 in grants-in-aid to university hospitals and research centers and \$139,925 which will be used in supporting forty scientific fellowships for young men and women. The grants-in-aid will make possible fifty-two individual investigations to be carried on in twenty-three states, three Canadian provinces, in Puerto Rico and in two other countries.

Established to support research which will help prolong life, the Life Insurance Medical Research Fund is the pioneer agency supporting research into diseases of the heart and arteries. These diseases are the number one health problem now existing in the country and account for more than half of all deaths. Support of research into heart disease as the sole activity of the Fund was decided upon at a conference of medical scientists held in New York City last June.

Since the Fund began operation it has supported 205 research programs and 241 research fellowships and its work has been carried on in ninety-eight different institutions. Numerous important additions to knowledge about heart disease have been made and many important leads will be investigated during the coming year directed to better methods of treating heart disease and obtaining more knowledge about how it may be controlled or prevented.

Two grants were made to further research in Minnesota. An award of \$16,000 was made to the University of Minnesota Medical School for research by Dr. Ivan Baronofsky on problems of acquired heart disease from the standpoint of surgical treatment. The other grant was a postdoctoral research fellowship award which was made to Dr. Morley Cohen, of Minneapolis, for research under the guidance of Dr. C. Walton Lillehei of the University of Minnesota.

WALTER REED SOCIETY

At the Walter Reed Society meeting held April 8, in Chicago, the following officers were elected: Dr. Max S. Sadove, Head, Department of Anesthesia, University of Illinois, president; Dr. Charles F. Code, Professor of Physiology, Mayo Foundation, University of Minnesota; Dr. Clinton H. Thienes, Director, Huntington Memorial Hospital, Pasadena, California, and Dr. Y. T. Oester, Head of Pharmacology, Stritch Medical School, Loyola University, vice presidents, and Dr. Frances A. Hellebrandt, Director, Department of Physical Medicine and Rehabilitation, University of Illinois, secretary-treasurer.

The Walter Reed Society is comprised of individuals who have served as voluntary subjects for experimental research.

Woman's Auxiliary

BLUE EARTH COUNTY HOLDS RECRUITMENT TEA

Mrs. Alton E. Lindblom, President

The Woman's Auxiliary to the Blue Earth County Medical Society were hostesses to sophomore, junior and senior high school girls at a tea designed to interest them in nursing careers. The tea was held at the home of Mrs. Bradley Troost in Mankato, the first week in April.

Attendance was good, and two student nurses and one graduate nurse discussed nursing career advantages with the high school girls. Also, the Auxiliary sponsored a movie on nursing at the meeting.

The Blue Earth County Auxiliary has also been very active throughout the year, carrying on many important auxiliary programs in the community.

In Memoriam

ADOLPH H. AHRENS

Dr. Adolph H. Ahrens, formerly a resident of Saint Paul but recently on the staff of the Sandstone state hospital, died apparently from a stroke on April 15, 1953. He was seventy-one years of age, having been born on August 15, 1881, at Otranto, Iowa.

Dr. Ahrens attended the University of Minnesota from 1906-1909 and graduated from Hahneman Medical College in Chicago in 1910. He interned at Flower Hospital in New York City and took postgraduate training in cystoscopy at the New York Postgraduate School.

Dr. Ahrens began practicing in Saint Paul in 1912, and in May, 1952, moved to Sandstone where he was on the staff of the state hospital there.

Dr. Ahrens was a member of the Ramsey County Medical Society, the Minnesota State Medical Association, and the American Medical Association. He was a past president of the Saint Paul Automobile Club, a life member of the Saint Paul Athletic Club and a past president of the Optimist Club of Saint Paul.

Mrs. Ahrens had acquired a reputation in medical circles as a composer and singer, having sung in productions of the Saint Paul Civic Opera when she lived in Saint Paul. Dr. Ahrens is survived by his widow, Jane, a daughter, Mrs. Frederick H. Clapp, two granddaughters, a brother, Dr. Albert E. Ahrens, and a sister, Mrs. Clara Hedemark, all of Saint Paul.

ELTON FORREST CLOTHIER

Dr. E. F. Clothier, a practicing physician of Elk River for the past seventeen years, died on March 26, 1953, of a heart attack.

Dr. Clothier was born in Minneapolis, July 16, 1902. He graduated from the University of Minnesota Medical School in 1929 and interned at St. Mary's Hospital in Minneapolis and at Glen Lake Sanatorium. He practiced from September, 1929, to November, 1935, at Westfield, Wisconsin, before taking over the practice of Dr. G. E. Page at Elk River in 1935.

Dr. Clothier was a member of the East Central Medical Society, the Minnesota State Medical Association and the American Medical Association. He was also a member of the Northwest Pediatric Society.

Dr. Clothier lived at nearby Little Falls. He is survived by his wife, Rose; two sons, Alan of Elk River and Forrest of Wisconsin, and a daughter, Carole Ann, of Elk River.

PETER HUBERT CREMER

Dr. Peter H. Cremer, Hastings, Minnesota, died March 22, 1953, at the age of seventy-five.

Dr. Cremer was born March 21, 1878, at Cashton, Wisconsin. Tragedy struck his home during his childhood when diphtheria took three of his brothers and sisters within a few days and three more died during

the following three weeks. A graduate of Rush Medical College, Chicago, in 1904, he practiced a short time at Red Wing and Cannon Falls before locating at Hastings in 1916.

Dr. Cremer was mayor of Hastings from 1942 to 1944 and was a Dakota County Commissioner from 1932 to 1944. He also served as city health officer.

In 1949 he was named the eminent first citizen of Hastings by the Lyle Russell Post of the Veterans of Foreign Wars. Attending the ceremony were Governor Luther Youngdahl and high ranking officials of the Minnesota Veterans of Foreign Wars.

He was a member of Goodhue County Medical Society, the Minnesota State Medical Association and the American Medical Association.

Dr. Cremer was married to Delia Noel of Mazeppa in 1914. They had no children. He is survived by one brother, Herman Cremer, of Cashton, Wisconsin.

FRANCIS J. CROMBIE

Dr. Francis J. Crombie, of North Saint Paul, died March 9, 1953, at the age of forty-eight.

Dr. Crombie was born at Columbus, Ohio, September 8, 1904. He graduated from the University of Minnesota Medical School in 1931 and interned at Miller Hospital, Saint Paul. He had practiced at North Saint Paul since 1931 and had opened new offices in 1950 on Highway 100 near the town. During the past year, Dr. M. J. Bernier had been associated with him.

Dr. Crombie was widely known as a breeder of Holstein cattle and was a director of the Twin City Milk Producers Association.

He was a member of the Ramsey County Medical Society, the Minnesota State Medical Association and the American Medical Association and was a member of the staff of St. John's Hospital in Saint Paul.

Dr. Crombie was married to Veronica Zankel while a student at the University. His wife and six children survive him.

FREDERICK ALONZO ENGSTROM

Dr. Frederick A. Engstrom of Wanamingo, Minnesota, died on April 8, 1953.

Dr. Engstrom was born in Red Wing on June 15, 1883, and was reared in Cannon Falls where he attended high school. After attending Carleton College for two years, he transferred to the University of Minnesota where he received his medical degree in 1908.

During World War I, he served in the Army Medical Corps and was discharged in 1919 as a major.

Dr. Engstrom, for a time, was a member of the Rice County Medical Society, the Minnesota State Medical Association and the American Medical Association. He had practiced for over thirty years in Wanamingo and

(Continued on Page 548)



Childhood constipation deserves treatment which gently restores normal peristaltic movements; drastic elimination cannot permanently correct the condition and may be harmful to the child.

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child's favorite beverage, Metamucil provides a gentle, corrective stimulation to peristalsis. There is never a "rush"—never a weakening diarrhea with Metamucil.

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SEARLE Research in the Service of Medicine

IN MEMORIAM

FREDERICK ALONZO ENGSTROM

(Continued from Page 546)

was a member of the local Masonic Lodge and the Wamamingo school board for a number of years. In 1936, he was chairman of the Goodhue County Democratic Committee.

Dr. Engstrom is survived by his wife, two sons, Conley A. of Eden Prairie and Dr. Frederick W. of Detroit, Michigan, and a daughter, Mrs. Janet Hendricksen of Minneapolis.

MIGUEL ANGEL FLORES

Dr. M. A. Flores, a Costa Rican native who was a consul at Rosemount, Minnesota, and practiced medicine there, died suddenly of heart disease on April 14, 1953. He was sixty-two years of age.

Dr. Flores was born at Heredia, Costa Rica, April 19, 1890. He obtained his M.D. degree from the University of Pennsylvania in 1918 and practiced for four years at Lonsdale before moving to Rosemount.

Dr. Flores is survived by his widow and three children, Michael, Ofelia, and Ester. Two brothers and a sister live in Costa Rica and one sister in Mexico.

JENNETTE M. McLAREN

We wish to pay tribute, worthy and well deserved, to Dr. Jennette M. McLaren. She was born in McHenry County, Illinois, December 26, 1857, the daughter of Mr. James A. McLaren and Susanna Quilhot McLaren and died Easter Sunday evening, April 5, 1953, at Fairview Hospital in Minneapolis, Minnesota—a span of over ninety-five years.

A group of the McLaren family, about 1750, came from Perthshire, Scotland, where the family had been for 300 years. They settled in and about Johnstown, New York. Some moved to various parts of the United States but Dr. McLaren's direct ancestors remained a considerable time in the above location. Her father came west and took up government land in northern Illinois. Dr. McLaren's mother was of French origin and one ancestor, a physician, came to America from Bordeaux, France.

Dr. McLaren attended the local rural school and high school in Illinois and then taught for six years. She matriculated in the Medical School at the University of Michigan, where, according to her statement, the course had been rather recently extended from two to three years. She was graduated June 30, 1887.

There were few available intern positions for women at that time but she secured a fourteen months' internship in the New England Hospital for Women and Children in Boston. Because of the excellent service which she received and liked, she stayed over the regular term to fill a vacancy in the dispensary service. She always praised the hospital and its work.

She was licensed in Minnesota by examination (License Number 60) on April 8, 1889, and first began practice in Minneapolis, in an office on Western Avenue. She brought with her to Minneapolis Mary M. Hall, an

excellent nurse from the Boston Hospital School of Nursing. After nine months, she came to Saint Paul where she was engaged as house physician in a private hospital of nine beds, opened at 653 and 655 Portland Avenue in November, 1889, by Dr. Helen W. Bissell. Doctors Charles A. Wheaton, Archibald MacLaren, John F. Fulton and Perry H. Millard were among those who brought patients to the hospital. Doctor Bissell had been the resident physician in the Boston Hospital.

From 1890, for ten or twelve years, Doctor McLaren was associated with Dr. Archibald MacLaren in the gynecological clinic at the West Ninth Street Dispensary and assisted him in many hospital cases till the introduction of interns obligated him to give them the opportunity for work.

At one time she had charge of the maternity cases at the Salvation Army Home, before the Home became associated with the Department of Obstetrics of the University of Minnesota. She also taught obstetrics at the City and County (Ancker) Hospital and maintained an office in the Endicott Building.

When the Lowry Building was being planned, Dr. A. W. Dunning, a specialist in nervous and mental disease (for whom the Dunning Playground was named) asked Doctor McLaren to share his office and from the plan of the building they chose Suite 803. Before the expiration of their first lease at 803 Lowry Building, in September, 1915, Doctor Dunning and Doctor McLaren asked Dr. Katherine A. Nye to become associated with them. In December, 1915, Dr. Dunning, after a few hours' illness, died of a coronary disease. Doctor McLaren and Doctor Nye continued to occupy this suite and in September, 1921, Dr. Lillian L. Nye joined them. Doctor McLaren continued to practice at 803 Lowry Medical Arts Building until her retirement in 1939 at the age of eighty-one.

In 1911, she visited England spending some time in London clinics. Later, she went to Johns Hopkins for observation of Dr. Wm. Osler's excellent work.

Doctor McLaren was affiliated with most of the Saint Paul hospitals, but more particularly in the later years of her practice with St. Luke's and Miller. She had an extensive practice and a host of friends.

About 1929 she went on a nine months' trip around the world.

Throughout her medical career, Doctor McLaren was active and interested in many civic and philanthropic organizations, the Community Chest, Salvation Army Home for Girls, Jean Martin Brown Home, Protestant Home, the Young Women's Christian Association, Baby Welfare Association (now the Family Nursing Service), Minnesota State Board of Examiners of Nurses, and the Alpha Epsilon Iota sorority. She was very active in her church, especially in the Christian Endeavor and missionary departments. She was a member of the Dayton Avenue Presbyterian Church of Saint Paul until 1938, when she became a member of the Grace Presbyterian Church of Minneapolis. She moved from Saint Paul to Minneapolis on December 30, 1937, making her home with Mr. and Mrs. James E. Williams.

She was an emeritus member of the University of Michigan Alumni Association, a member of the Ramsey

IN MEMORIAM

County Medical Society, and the Minnesota State and American Medical Associations.

Doctor McLaren used to say, "While a man's life does not consist of the abundance of things which he possesses, yet I cannot help liking some of the things which I possess." She was most happy on three occasions—the first, when she received her Emeritus Honor Alumni pin from the University of Michigan in 1949; the second, when she received her Fifty-Year pin from the Minnesota State Medical Association; and the third, when she was given her Life Membership Certificate from the Minnesota State Medical Association.

She was active until a week before her death. She had many hobbies. She was a very genuine person and gave of herself unselfishly for others, performing many deeds of kindness of which few knew. If human and unavoidable mistakes were made, she always went a long way to make amends.

On December 1, 1952, Doctor McLaren mailed the following copy in her own handwriting to Dr. Katherine A. Nye:

"I know the night is near at hand,
The mists lie low on hill and bay,
The autumn leaves are drifting by
But I have had the day.
Yes, I have had, dear Lord, the day:
When at thy call I have the night
Brief be the twilight as I pass
From light to dark, from dark to light."

S. WEIR MITCHELL, M.D.

Dr. McLaren is survived by three nieces: Mrs. C. E. Taylor of Orange, New Jersey; Mrs. C. B. Long and Mrs. Ada Sprecher, both of San Jacinto, California. Two nephews, John McLaren Burbank of Saint Paul and James Frank Burbank of Woodstock, Illinois, also survive her.

Because of Doctor McLaren's Scotch and French descent, I would like to paraphrase a quotation from the song "Beside the Bonnie Briar Bush" which surely applies to her, even though her remains are in the family lot in Woodstock, Illinois.

"The Doctor—bless her sainted soul—
Has made her final call."

We honor Dr. Jennette M. McLaren as a grand pioneer physician.

KATHERINE A. NYE, M.D.

CHARLES K. MAYTUM

Dr. Charles K. Maytum, a senior consultant in the Division of Medicine at Mayo Clinic, died on April 10, 1953, at the age of fifty-seven years.

Dr. Maytum was born at Alexandria, South Dakota, December 20, 1895. He attended South Dakota University before obtaining his M.D. degree from the University of Iowa in 1919. He interned at Cincinnati General Hospital and practiced in South Dakota in 1921 and 1922 before taking a residency at the Mayo Foundation from 1922 to 1925. He joined the Mayo Clinic in 1925. In 1934, Dr. Maytum was made an assistant professor at the University of Minnesota graduate medical school and the Mayo Foundation. In 1945, he became an associate professor.

MAY, 1953

For three years, during World War II, Dr. Maytum served as a lieutenant colonel and later as a colonel in the Medical Corps of the Army.

He was a member of the Olmsted-Houston-Fillmore-Dodge County Medical Society, the Minnesota State Medical Association, and the American Medical Association.

Dr. Maytum is survived by his wife, Elinora; a daughter, Mrs. John W. Berkman, of Rochester; two sons, Wellington James of Virginia Beach, Virginia, and Charles David of Albuquerque, New Mexico. Three brothers and four sisters also survive.



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◆ Of General Interest ◆

First Lieutenant Fae M. Adams, M.C., of San Jose, California, was sworn in on March 11, 1953, the first woman to receive a commission in the Regular Army of the United States. One of the Army's twenty women reserve medical officers now on active duty, Lieutenant Adams has been stationed at Camp Crowder, Missouri, since July 6, 1952. She is the first woman medical officer integrated into the Regular Army under legislation passed by the 82nd Congress.

* * *

Dr. Kristofer Hagen, of Cokato, attended a medical conference in Chicago, early in March. **Dr. William T. Greenfield**, also of Cokato, attended a meeting of the American Academy of General Practitioners, March 22, in St. Louis, Missouri.

* * *

Dr. Malcolm W. Hargraves, of Rochester, was named by the governor to a four-year term on the State Water Pollution Control Commission, in March. He succeeds Val P. Stauder of Saint Paul.

* * *

Dr. Paul C. Leck, Austin, attended a meeting of the House of Delegates of the American Medical Association in Washington, D. C., March 13-14. The session was called to consider President Eisenhower's proposal to establish a new cabinet post—that of health and education—under the Federal Security Administration. President Eisenhower addressed the group Saturday, March 14.

* * *

Dr. Robert Weyhrauch, formerly a member of the staff of the Alexandria Clinic, joined a medical clinic in Waterloo, Iowa, in March. Dr. Weyhrauch recently was separated from the Army Medical Corps.

* * *

Dr. Leon M. Boyd, of Wadena, attended the meetings of the Graduate Medical Assembly, held in New Orleans, Louisiana, in March.

* * *

Dr. K. L. Nelson, health officer at Warroad, in conjunction with **Dr. C. B. Nelson**, of the Minnesota State Health Department, issued a public statement in March concerning precautions to be taken in preventing and caring for persons with infectious hepatitis. The community of Warroad was having a mild epidemic.

* * *

Dr. Henry Van Meier, of Stillwater, spoke Sunday, March 15, from the pulpit of the Ascension Lutheran Church, Saint Paul, on "Guilt, Tranquility, and God." Dr. Van Meier's talk included both the psychiatric and religious development of his topic.

* * *

Dr. Clayton Klakeg, of Rochester, was married, March 3, to Miss Shirley Jane Richards, of San Bern-

nardino, California. The wedding took place in the First Congregational Church of San Bernardino.

* * *

Dr. John M. Waugh, Mayo Clinic surgeon, was honored March 14, at the Founders' Day convocation of Tarkio College at Tarkio, Missouri, for "outstanding achievements and services to others." A 1927 graduate of Tarkio College, Dr. Waugh was one of ten alumni and five citizens who received citations of merit.

* * *

Dr. Robert Hebbel, professor of pathology at the University of Minnesota, spoke at the meeting of the Twin City Society of Medical Technologists, held at Macalester College, Saint Paul, March 19.

* * *

Dr. J. E. Murphy, who has practiced in Staples since June 1949, left for Whitefish, Montana, March 6, where he will be associated with the John B. Simons Clinic.

* * *

Dr. Sam Boyer, Jr., of Duluth, spoke on "Diseases of the Heart and Their Treatment," to the members of the Private Duty Section, Second District Nurses Association, at the March 17 meeting held at St. Luke's Hospital in Duluth.

* * *

Dr. F. C. Westerman, of Montgomery, was elected president of the staff of directors of the new Community Memorial Hospital of New Prague, at the February meeting.

* * *

Dr. Donald C. Balfour, director emeritus of the Mayo Foundation, has been elected foreign correspondent in the division of surgery, obstetrics and surgical specialties of the National Academy of Medicine.

* * *

Dr. and Mrs. C. J. Lund, of Fergus Falls, returned March 14, from a trip that took them to New Orleans, Biloxi and Mobile. While in New Orleans, Dr. Lund attended the New Orleans postgraduate assembly which about 3,000 physicians attended.

* * *

Speakers at the Minnesota Welfare Conference held March 23-25 in the Nicollet Hotel, Minneapolis, included: **Dr. C. Knight Aldrich**, associate professor of psychiatry at the University of Minnesota; **Dr. Frank H. Krusen**, of the Mayo Clinic and **Dr. Robert Mooney**, specialist in internal medicine, Saint Paul.

* * *

Dr. Viktor Wilson, Rochester, Sixth district health officer spoke at an open meeting on public health at the Methodist Church in Austin, April 1. **Dr. Paul**

Official Registration Figures

MINNESOTA STATE MEDICAL ASSOCIATION'S ANNUAL CONVENTION
Saint Paul, Minnesota **May 18-20, 1953**

Doctors	1,907
Nurses, Dietitians, Technicians, Social Workers and Medical Secretaries	410
Scientific Exhibitors	159
Commercial Exhibitors	536
Women's Auxiliary	544
Guests (Miscellaneous)	836
Total	4,392

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Leck, Austin physician, and several other local persons also addressed the group.

* * *

Dr. I. L. Oliver, of Graceville, attended the Inter-American Session of the American College of Surgeons, held at Sao Paulo, Brazil, during January and February. More than 200 surgeons from the United States attended various clinics and medical seminars throughout South America.

* * *

Dr. C. G. Uhley, of Crookston, president of the Minnesota division of the American Cancer Society, was the principal speaker at an open meeting accentuating county cancer fund appeal, which was held

MAY, 1953

in the Auditorium at Thief River Falls, March 19. Dr. Uhley explained recent developments in the battle against cancer and showed motion pictures dealing with the disease. **Dr. Theodore Bratrud**, of Thief River Falls, also spoke.

* * *

Dr. Delmar R. Gillespie, of Saint Paul, attended a regional meeting of the American College of Physicians, held at Kansas City, Missouri, March 20. Dr. Gillespie also visited Fort Leonard Wood, Missouri, where he was stationed during World War II.

* * *

Dr. A. L. Walonick, who has been in practice with the Twin Valley Medical Center for the past two

OF GENERAL INTEREST

years, left in March to practice in St. Louis Park. **Dr. C. J. Stadem** now operates the Twin Valley Center alone.

* * *

Dr. P. B. Schoeneberger, of Perham, talked on recent developments in the treatment of cancer to the members of the Frazee Women's Study Club, March 26. Movies on cancer were also shown.

* * *

A new cobalt unit to aid in cancer treatment, purchased with a \$50,000 gift from an anonymous Minneapolis donor, was put into operation at the University of Minnesota in April. The unit is part of the equipment of the University's radiation therapy division.

* * *

Dr. J. E. Edwards, of the Mayo Clinic, spoke on his experience in Korea last fall as a consultant to the U. S. surgeon general, at the spring convention of the International Relations Club held in Rochester, March 20. The International Relations Club is sponsored by colleges in the Rochester area.

* * *

Three Duluth surgeons—**Dr. Gordon J. Strewler**, **Dr. Josiah Fuller**, and **Dr. George F. Nisius**, discussed "Timely Cancer Topics," at a cancer forum, held March 21, in St. Luke's Hospital in Duluth.

* * *

Dr. F. F. Callahan, Saint Paul, chief of medical services, state division of social welfare, took part

in a panel discussion, "What are the Problems Affecting the Employment of the Tuberculous in Industry?" at the spring meeting of the Minnesota Rehabilitation Association, held at Ft. Snelling, March 24.

* * *

Dr. Paul J. Bilka of Minneapolis, gave a talk before the Grand Forks District Dental Society at Grand Forks, March 18. His subject was "Recent Advances in the Diagnosis and Treatment of Rheumatic Diseases."

* * *

Dr. I. Fisher, of Minneapolis, spoke before a regional seminar meeting at Marshall, Minnesota, March 31. Dr. Fisher's topic was skin cancer.

* * *

Dr. and Mrs. Bernard Flynn, of Hibbing, celebrated their tenth wedding anniversary, March 8, by entertaining the members of the Adams Clinic staff, of which Dr. Flynn is a member.

* * *

Dr. H. G. Ahrens, of Worthington, associated with the Worthington Clinic for the past year, left March 26 for Lincoln, Nebraska, where he now practices.

* * *

Dr. James J. Waring, professor of medicine at the University of Colorado Medical School, gave the eighteenth annual John W. Bell Tuberculosis lecture to members of the Hennepin County Medical Society, April 6, in Minneapolis. The lectureship is



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OF GENERAL INTEREST

named for the late Dr. John W. Bell, who practiced medicine in Minneapolis for fifty-one years.

* * *

Dr. James Wagoner, of Harmony, recently moved into his new clinic building which was completed March 22.

* * *

Dr. W. G. Benjamin, Dr. R. J. Kotval, and Dr. R. W. Keyes, of Pipestone, attended the Lyon-Lincoln County medical seminar, March 31, held at Marshall.

* * *

Two representatives of the State Board of Health, Dr. R. N. Barr, Deputy Executive Secretary for the State Board, and Dr. Helen M. Knudsen, of the Hospital Facilities Division, spoke at Hastings, March 25, to a group of citizens trying to decide what must be done to get Memorial Hospital finished and into operation.

* * *

An acute shortage of nurses forced partial closure of the White Earth Indian Hospital on the reservation. Dr. R. W. Williams, Minneapolis area medical officer for the U. S. Public Health Service, announced in March that admissions to the hospital would stop April 1, and thereafter patients are to be transported to the Indian Hospital at Cass Lake.

* * *

Dr. Clark H. Millikan, of the Mayo Clinic, participated in a postgraduate course in neurology which was sponsored by the University of Kansas School of Medicine in Kansas City, Kansas, March 18.

* * *

Dr. John Giebenhain, recently separated from service with the army medical corps, resumed his practice at 2220 Lowry Avenue N., Robbinsdale, in March.

* * *

Dr. E. V. Bridge, medical director and superintendent of the Mineral Springs Sanatorium at Cannon Falls, spoke to the members of the Northfield Lions Club, March 16, advocating the practice of taking chest x-rays of all patients admitted to the local hospital.

* * *

Dr. Edgar V. Allen and Dr. Robert R. Kierland, of Rochester, attended the special session of the House of Delegates of the American Medical Association, held in Washington, D. C., March 14.

* * *

Dr. Hendrik De Kruif, of Fergus Falls, spoke to people of Fergus Falls in March urging better support of the blood program there, which is facing an acute crisis due to lack of donors for blood replacement.

* * *

Dr. M. H. Larson, who has been operating a small hospital at Nicollet, began practice in Lake Benton in the new clinic which was completed late in April.

MAY, 1953

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OF GENERAL INTEREST

Dr. James H. De Geest, Minneapolis General Hospital intern, was injured when the ambulance in which he was making an emergency sick call, collided with an automobile. Dr. De Geest suffered a nose injury. The ambulance driver and the driver of the automobile were not hurt.

Dr. J. Arnold Malmstrom, of Virginia, suffered a heart attack March 19, at his home. He is reported doing well at the Virginia Municipal Hospital but he will be hospitalized for a considerable period of time.

Dr. Charles W. Mayo, of Rochester, spoke on "Ulcerative Colitis" at a meeting of the Dutchess County Medical Society in Poughkeepsie, New York, March 11.

A Russell J. Moe Scholarship fund was established by the headmaster at Shattuck School, Faribault, in March, in memory of the late **Dr. Russell J. Moe**, Duluth physician and surgeon who died March 8. Dr. Moe's elder son, Russell, Jr., was graduated from Shattuck in 1952, and another son, Richard, is a member of the junior class at the present time.

Dr. Warren E. Wilson, of Northfield, was elected city physician for one year by the Northfield City Council at the meeting held March 17.

Dr. Kathleen B. Jordan, of the Granite Falls Riverside Sanatorium medical staff, and field physician for the state Christmas Seal organization, gave tuberculin test check-ups to about 1,135 Owatonna school children, the week of March 23.

Dr. A. H. Pemberton, of Rochester, was guest speaker at a meeting of the Fellows' Association of Texas, the membership of which is made up of former fellows of the Mayo Foundation, at Temple, Texas, March 7.

Dr. K. A. Peterson, disaster medical officer at Marshall, assisted with a four-day disaster institute held at Marshall High School, March 18-21, for Red Cross branch officers and city officials from surrounding towns.

Dr. L. C. Barr, of Albert Lea, assisted with the local spring immunization clinics held in the community rural schools.

Dr. J. M. Gacusana and **Dr. K. W. Covey**, of Mahanomen began a week-end schedule of taking calls, in March. Only one of the doctors will be available each weekend from Saturday noon until Monday morning. As a public service, the local paper will carry a notice each week listing the doctor who is on call.

Dr. H. L. Huffington, of Montevideo, opened an office for practice in the Anderson Building at Waterville, April 15.

Drs. Arlie R. Barnes, **William H. Dearing**, **Hugh R. Butt**, and **Edgar V. Allen**, of the Mayo Clinic, were directors of Course No. 4, "Selected Subjects in Internal Medicine," conducted at the Mayo Clinic and Mayo Foundation for members of the American College of Physicians, the week of March 23. Course No. 1 was given in Cleveland; Course No. 2, in Los Angeles; and Course No. 4, in New York.

Guest speakers at the course given in Rochester included **Dr. Edmund B. Flink**, professor of medicine at the University of Minnesota; **Dr. Carl V. Moore**, professor of medicine in Washington University, St. Louis; **Dr. John E. Howard**, professor of medicine at Johns Hopkins University, Baltimore; **Dr. Irvine H. Page**, director of research in the Cleveland Clinic, Cleveland, Ohio; **Dr. H. Marvin Pollard**, professor of medicine in the University of Michigan, Ann Arbor; **Dr. Leon Schiff**, professor of medicine at the University of Cincinnati; and **Dr. Eugene A. Stead, Jr.**, professor of medicine at Duke University, Durham, North Carolina.

Drs. R. P. Buckley, **R. J. Dittrich**, **George Doyle**, **R. A. Place** and **John Powers**, all of Duluth, assisted in the immunization clinics recently held throughout the Duluth parochial schools.

Dr. Mario Fischer, of Duluth, was elected chairman of the sub-committee named to work with the architect on the plans for St. Mary's Hospital in-



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firmly, at the meeting of the St. Louis County board, held March 16. **Dr. P. G. Boman**, and **Dr. A. O. Swenson** were also named to the committee.

* * *

Dr. M. H. Larson, of St. Peter, attended a jubilee dinner in Milwaukee, March 26, held in honor of the twenty-fifth anniversary of his graduation class at Marquette University Medical School.

* * *

Dr. C. A. Williams, of Pipestone, attended the American Academy of General Practice meeting held in St. Louis, Missouri, the last week in March, on his way home from a six-weeks' vacation spent at Houston, Texas, and Florida.

* * *

Dr. C. E. Wilson, acting superintendent of the Blue Earth Community Hospital, reported on policies and statistics for the preceding year to the members of the Hospital Auxiliary at their annual meeting, held March 20.

* * *

Clarkfield, one of the largest schools in Yellow Medicine County to have a 100 per cent record of students participating in the tuberculin test survey, was presented its TB Control Certificate by **Dr. Kathleen Jordan**, field physician for the state Christmas Seal organization, in March.

* * *

Dr. H. L. Stemsrud, **Dr. E. R. Sather**, and **Dr. L. F. Wasson**, of Alexandria, attended a dinner meet-

ing of the Park Region Medical Society, held at Fergus Falls, March 21.

* * *

A free test for diabetes was offered the people of Nobles County during the period from April 6 through April 18. **Dr. D. J. Halpern**, of Brewster, chairman of the Nobles County Health Council, and **Dr. D. E. Nealy**, of Adrian, assisted the committee working on the project. The survey was sponsored by the Nobles County Health Council, the Public Health Nursing Service, the County Medical Society, and District 5, of the Minnesota Department of Health.

* * *

Dr. Frederick W. Behmler, formerly a member of the State Board of Health and now chief of staff at the Stevens County Community Hospital, was the principal speaker at a meeting of local citizens of Alexandria held March 26, to discuss construction of a Douglas County Community Hospital.

* * *

Dr. Owen H. Wangenstein, chief of the department of surgery, University of Minnesota Medical School, wrote a series of news stories on cancer for the Associated Press in March and April.

* * *

Dr. J. C. Vezina, of Mapleton, visited Dixon, Illinois, in March to attend a funeral of an old friend and visited many of his friends of years gone by when he was a coach at the Dixon High School.



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The Dixon paper carried an interview with Dr. Vezina on changes that have come about in some of the games, since 1920 when he was coaching.

* * *

Dr. Carl Kohlbry, medical director for the Duluth public schools, spoke on "Common Emergencies in Childhood," at the First Aid Instructors Club meeting, April 8, held at the Red Cross headquarters in Duluth.

* * *

Shortages of qualified personnel are slowing down chronic hospital planning in Minnesota, **Dr. Helen Knudsen** of the State Health Department said in a news interview, March 29.

* * *

At present, there are four hospitals in the state designed to treat patients with chronic diseases and, combined, these institutions have only 409 beds. Three of the units—St. Luke's Infirmary at Duluth, the Variety Club Heart Hospital on the University of Minnesota campus, and St. John's Hospital in Saint Paul—have been built since 1947 with federal aid. The fourth is the Virginia Infirmary at Virginia, constructed with funds furnished by St. Louis County. The building program, which has doubled the state's capacity in the last six years, is now temporarily stalled due to lack of trained personnel to staff further units.

* * *

Dr. Charles C. Cooper, of Saint Paul, held open house in St. Louis for all the Minnesota M.D.'s who were attending the American Academy of General Practitioners meeting held in St. Louis the last week in March. Physicians from Saint Paul who were present at the open house include **Dr. James Reid**, **Dr. John Ryan**, **Dr. A. E. Ritt**, **Dr. Floyd Thompson**, **Dr. H. J. Setzer**, **Dr. E. J. Fogelberg**, and **Dr. Arthur E. Walker**.

* * *

Dr. David Hoehn, of Holdingford, returned March 27, after attending Medical Meetings in Los Angeles, California, and a meeting of the American Academy of General Practice in St. Louis, Missouri, for the past three weeks.

* * *

Dr. O. J. Swenson and **Dr. S. T. Normann**, of

Waseca, attended the meeting of the American Academy of General Practice held at St. Louis, Missouri, the last week in March.

* * *

Dr. George S. Allen, formerly of New York, joined the staff of the Mineral Springs Sanatorium recently. He is assistant to **Dr. Ezra Bridge**. Dr. Allen was graduated from the University of Rochester Medical School in 1950, and interned at Memorial Hospital, Rochester, New York. Before coming to Mineral Springs, Dr. Allen was on the staff of the Veterans Hospital for tuberculosis patients at Batavia, New York.

* * *

Dr. W. M. Akins, of Red Wing, served as co-chairman for the annual Heart Fund campaign in the city, during the month of March.

* * *

Dr. L. B. Kuhlmann, of Melrose, initiated construction on a new medical office on Riverside Avenue near the Melrose Hospital, the first week in April.

* * *

Dr. Harold S. Diehl, Dean of the University of Minnesota Medical Sciences, was a guest member on the monthly doctor's round table which was televised on WCCO-TV at 8:45 a.m., Easter Sunday. The subject for discussion was chest x-raying of all hospital patients and employees as a protection against tuberculosis and an aid in discovery of tumors, cancer, heart disease, and other chest area conditions.

Regular panel members are **Dr. J. Arthur Myers**, Professor of Medicine and Public Health, University of Minnesota; **Dr. John Briggs**, Saint Paul, Chief of Medicine at Ancker Hospital; and **Dr. Ezra V. Bridge**, superintendent of Mineral Springs Sanatorium, Cannon Falls.

* * *

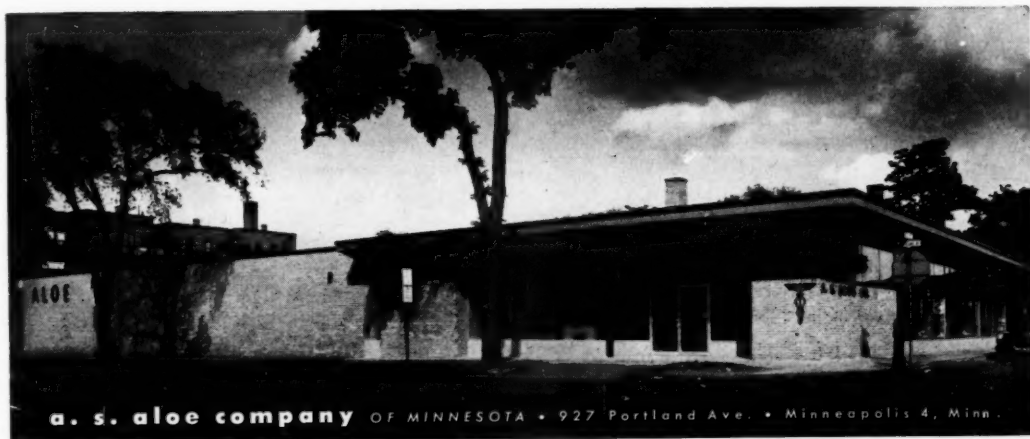
Dr. and Mrs. R. A. Beise of Brainerd will be Minnesota's guests of honor at the First Western Hemisphere Conference of the World Medical Association, to be held in Richmond, April 22-25, 1953, in observance of the lengthening of life and the constant improvement of human health.

Governor C. Elmer Anderson made the selection at the request of Governor John S. Battle of Virginia, who had asked each of his forty-seven fellow-Gov-



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ernors to appoint a physician who will reach the age of seventy-five during 1953 to visit Virginia and tell of medical advances that have taken place during his lifetime. The invitation includes the physician's wife.

Dr. Beise, a surgeon, was born in 1877, just before pioneering Robert Koch published a history-making treatise on causes of infection, opening the way to rapid progress in various fields of medicine. Dr. Beise was graduated in 1901 from Rush Medical College, Chicago.

At the Richmond conference, guests will be greeted by Dr. Louis H. Bauer, president of the American Medical Association, and by leaders of Latin American medical societies. In addition to scientific sessions, there will be opportunities for visiting historic sites in Virginia, including the eighteenth century Williamsburg restoration. Expenses of the conference, and of guests and delegates, are covered through a grant by A. H. Robins Co., Inc., ethical pharmaceutical house of Richmond, on the occasion of its seventy-fifth anniversary.

* * *

Five new physicians, who were appointed as members of the permanent staff of the Mayo Clinic in April, are: **Drs. Lloyd G. Bartholomew, William J. Martin, Raymond V. Randall, Randolph A. Rovelstad and Donald A. Scholz.**

Dr. Bartholomew was graduated from the University of Vermont College of Medicine in 1944, interned

at Mary Hitchcock Memorial Hospital, Hanover, New Hampshire, and was assistant in medicine following his internship. He served with the army medical corps for two years and was a fellow in medicine at Mary Hitchcock Hospital for a year. He entered the Mayo Foundation in April, 1949, and received the degree of M.S. in medicine from the University of Minnesota in July, 1952.

Dr. Martin received his medical degree from Georgetown University Medical School, Georgetown, Maryland, and interned and was a fellow at Georgetown University Hospital. He served with the army medical corps for two years. Dr. Martin entered the Mayo Foundation in 1949, and received the degree of M.S. in medicine in June, 1952.

Dr. Randall was graduated from Harvard College Medical School in 1945, interned at Massachusetts General Hospital, Boston, and served with the army medical corps for two years. He entered the Mayo Foundation in 1948, and received the degree of M.S. in medicine from the University of Minnesota in June, 1951. From 1951 to 1952 he was a teaching fellow in pediatrics and medicine at Harvard Medical School, and returned to the Mayo Foundation as an assistant to the staff in October, 1952.

Dr. Rovelstad was graduated from Northwestern University Medical School in 1944, interned at Passavant Memorial Hospital, Chicago, and entered the Mayo Foundation in January, 1945. He served with

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the army medical corps for two years and has been assistant to the Mayo Foundation staff since October, 1951. Dr. Rovelstad is a candidate for the Ph.D. degree in medicine.

Dr. Scholz received his medical degree from Western Reserve Medical School in 1945, interned at City Hospital, Cleveland, and served with the army medical corps for two years. He was a medical resident at City Hospital, Cleveland, for one year and entered the Mayo Foundation in July, 1949. He received the degree of M.S. in medicine from the University of Minnesota in July, 1952.

* * *

Dr. Howard L. Horns, Assistant Dean of the University of Minnesota Medical School, left for Fort Sam Houston, Texas, March 16, to serve with the U. S. Army.

Dr. Horns is certified by the Board of Internal Medicine and is an Associate Professor of Medicine. In 1949, he succeeded **Dr. Myron Weaver** as Assistant Dean. (Dr. Weaver left to become Dean of the new medical school of the University of British Columbia in Vancouver, Canada.) In this capacity, Dr. Horns has served as chairman of the Admissions Committee, chairman of the Student Work Committee and chairman of the Internship Committee. Now forty-one, Dr. Horns was rejected for military service in World War II.

As Associate Professor of Medicine, Dr. Horns has been chief of the Hematology Clinic of the University Hospital's Out-Patient Department, and in charge of the sophomore medical course in Physical Diagnosis. He has served for three months each year as attending physician to one of the medical services of the University Hospitals and has been the consultant in radioisotopes to the Ft. Snelling Veterans Hospital.

Dr. William F. Maloney has been appointed acting Assistant Dean of the Medical School. He was graduated from the University of Minnesota in 1941 with a major in Business Administration and received his medical degree in 1946. After his separation from the Army medical corps, Dr. Maloney served as a part-time staff member at Glen Lake Sanatorium and did special graduate work at the Trudeau Sanatorium, Saranac Lake, New York. From 1950 to 1952, he was a fellow in medicine at the University Hospitals and from July 1, until he was appointed Acting Dean, he held a National Heart Institute Traineeship in the Department of Medicine.

Dr. Maloney will devote part time to teaching and clinical service in internal medicine and part time to his duties as Acting Assistant Dean of the Medical School.

* * *

Assisting at laying the corner stone, March 30, for the new Mayo Clinic diagnostic building were **Dr. S. F. Haines**, chairman of the board of governors of the Mayo Clinic; **Dr. C. W. Mayo**, chairman of the Mayo Association; and **Dr. M. W.**

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Comfort, representing the building advisory committee. Deposited in the stone was the traditional box containing papers, pictures and publications relating to the Mayo Clinic and the new building. Completion date for the \$12,000,000 building has not been set.

* * *

Dr. Robert Holmen, of Saint Paul, presided at the laymen's session of the Ninety-fifth Annual Convention of the Augustana Lutheran Minnesota Conference, held at the Gloria Dei Lutheran Church, Saint Paul, during the week of April 13. Bishop Bo Giertz of Sweden was a guest at the conference.

* * *

Dr. Luther H. Zick, a general surgeon, joined the staff of the Grand Rapids Clinic in April. A 1943 graduate of the University of Michigan Medical School, Dr. Zick served with the army in World War II, and completed a residency at the Mayo Clinic before going into private practice at Tampa, Florida.

Construction has been started on a new clinic building in Grand Rapids.

* * *

Dr. Mary C. Ghostley, retired director of Lake Julia Sanatorium at Puposky (Lake Julia was closed in January because of the decline of tuberculosis incidence), was appointed director of District Health

Unit No. 1 of the Minnesota Department of Health with headquarters at Bemidji. Dr. Ghostley was made a life member of the Minnesota Public Health Conference in 1950 and was presented with a plaque by the Minnesota Tuberculosis and Health Association for distinguished service.

* * *

Dr. Kenneth Stein, of Lakeville, joined the staff of the State Hospital in St. Peter, in April.

* * *

Dr. E. J. Wohlrabe, **Dr. E. L. Penk**, and **Dr. W. G. Nuessle**, of Springfield, assisted with the immunization program in the public and parochial schools in Brown County, from April 13 through April 17.

* * *

Dr. A. S. Midthune, of Lake Park, president of the Clay-Becker County Medical Society, endorsed the 1953 American Cancer Society crusade which opened in Detroit Lakes, April 1.

* * *

Dr. S. W. Watson, of Royalton, attended the convention of the American Academy of General Practice held in St. Louis, Missouri, the last week in March.

* * *

A farewell party for **Dr. C. R. Ferrell** was given April 9, by the citizens of Remer. Dr. Ferrell, who

OF GENERAL INTEREST

lived in Grand Rapids, had been making two trips a week to Remer to take care of his patients there.

* * *

Dr. L. N. Dale, of Red Lake Falls, attended the annual convention of the American Academy of General Practice, held in St. Louis, Missouri, the last week in March.

* * *

Dr. W. W. Will, of Bertha, attended the American Medical Association House of Delegates meeting, held in Washington, D. C., March 13-14.

* * *

Among the forty-two doctors who began fellowships at the Mayo Foundation spring quarter, are **Dr. John L. Juergens**, Belle Plaine, and **Dr. Lewis W. Larson**, Saint Paul, majoring in internal medicine, and **Dr. Frederick L. Behling**, Moorhead, majoring in orthopedic surgery.

* * *

Dr. D. E. Nealy, of Adrian, who was on the Nobles County Committee for the survey of diabetes project (April 6 through 18), was interviewed over station KWOA, Worthington, April 5, concerning the cause and treatment of diabetes.

* * *

Dr. Stewart C. Thomson, assistant director of the University of Minnesota School of Public Health, spoke on public health problems at the sixteenth annual continuation study course for pharmacists, held at the Center for Continuation Study, April 20-22.

* * *

Dr. Albert L. Walonick, formerly of Twin Valley, opened an office in St. Louis Park, April 9. Dr. Walonick, a graduate of the University of Minnesota, interned at Minneapolis General Hospital and was a navy surgeon for four years.

* * *

Dr. and Mrs. O. K. Behr, of Crookston, returned in April from a combined business and pleasure trip

to California. In Los Angeles, Dr. Behr attended a meeting of the American College of Surgeons.

* * *

Dr. Glenn P. Schmitz, president of the Morrison County Medical Society, endorsed the 1953 American Cancer Society crusade, which opens in Little Falls, April 20.

* * *

Dr. Frank W. Newell, former University of Minnesota student and intern at Ancker Hospital, Saint Paul, has been named associate professor of ophthalmology at the University of Chicago.

* * *

The inaugural ceremony of Dr. Edward J. McCormick of Toledo, Ohio, as president of the American Medical Association, will be broadcast over the American Broadcasting Company network on Wednesday evening, June 3, by transcription inasmuch as the network will be devoted to the coronation ceremonies of Queen Elizabeth of England. Also transcribed on Wednesday night will be the popular "Dr. Christian" radio program featuring the well known actor Jean Hersholt. This will be carried by the Columbia Broadcasting System. Physicians who cannot attend the AMA meeting in New York are urged to watch the radio listings in the newspapers for the local broadcasting times.

* * *

Correction.—In the April issue Dr. Albert V. Stoesser was incorrectly reported to be one of the candidates orally examined by the new Subspecialty Board of Pediatric Allergy, whereas he served as an examiner.

The item should have read:

Dr. Albert V. Stoesser, Department of Pediatrics, University of Minnesota, was one of the examiners on the new Subspecialty Board of Pediatric Allergy which examined its first group of candidates orally at the Children's Hospital, Harvard Medical School, Boston, February 25, preceding the annual meeting of the American Academy of Allergy.

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30 days of Nurse at Home.....	5.00 per day	10.00 per day	15.00 per day	20.00 per day
Laboratory Fees in Hospital.....	5.00	10.00	15.00	20.00
Operating Room in Hospital.....	10.00	20.00	30.00	40.00
Anesthetic in Hospital.....	10.00	20.00	30.00	40.00
X-Ray in Hospital.....	10.00	20.00	30.00	40.00
Medicines in Hospital.....	10.00	20.00	30.00	40.00
Ambulance to or from Hospital.....	10.00	20.00	30.00	40.00
COSTS (Quarterly)				
Adult	2.50	5.00	7.50	10.00
Child to age 19.....	1.50	3.00	4.50	6.00
Child over age 19	2.50	5.00	7.50	10.00

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HOSPITAL NEWS

Dr. Roy Hoffman, of Minneapolis, was named chief of the **Fairview Hospital**, Minneapolis, medical staff, with Dr. Donald Simonson, vice chief; Dr. Titus Bellville, secretary, and Dr. Conrad Karleen, treasurer.

The medical staff executive committee includes the officers and Dr. John Moe, Dr. Myron Lysne, Dr. William Davis, Dr. Rudolph Koucky, and Dr. Donald Frane.

* * *

St. Joseph's Hospital, Saint Paul, opened a research laboratory to study diseases of the veins and arteries, in April. Prevention as well as treatment will be among the objectives of the laboratory, the only facility of its kind in the Twin Cities for specific study of these diseases. This additional laboratory system will begin research into characteristics of the diseases, using rabbits for testing, and establish a diagnostic clinic to study the human element this summer.

The director of the animal experiments is Dr. Davitt A. Felder, instructor in surgery at the University of Minnesota, and supervisor of teaching in surgery at St. Joseph's Hospital.

The laboratory has been named the **David Young Memorial Laboratory**. At present it is financed by two grants: \$5,000 annually is contributed by the

David Young Foundation of Saint Paul, and \$26,000 has been authorized by the **Louis and Maud Hill Foundation** through the University of Minnesota.

BLUE CROSS-BLUE SHIELD NEWS

An astounding finding resulted from a recent analysis of Blue Shield claims disallowed during the year 1952. The analysis revealed that 60 per cent of claims classified in 1952 as "rejects," either had no Blue Shield contract in effect or else involved medical service not provided by the contract. In more exact detail, 20 per cent of these so-called rejections were based upon the fact that the subscriber had no Blue Shield contract, and another 10 per cent included the reasons that the contract had been cancelled, the service was rendered before the effective date of the contract, or the patient was a nineteen-year-old dependent not covered by a family contract. Of the remaining, 25 per cent involved non-hospitalized medical care, and 5 per cent unrelated x-ray services neither of which is covered under the contract. Still another interesting feature of this study was the fact that only 9.4 per cent of claims rejected were the result of pre-existing conditions whereas this figure had been as high as 13.6 during 1951.

The significance of these figures lies in the fact that 60 per cent of so-called rejected claims are not "rejects," and with some explanation can be avoided right in the doctor's office. In fact, the use of two general procedures

OF GENERAL INTEREST

by the staffs of the doctors' offices will enable them to determine in the great majority of cases whether or not the claim will fall into one of the above mentioned rejection categories.

The first of these procedures is the examination of the subscriber's identification card. From this, it can readily be determined whether or not the patient or subscriber has a Blue Cross or a Blue Shield contract, or both. On the side of the card containing the subscriber's name appears a space marked "coverage." In this square usually will appear several letters and possibly also a number. If the subscriber has a Blue Cross contract the first letter will be either a capital "S" or "F" depending on whether the subscriber has a single or family Blue Cross contract. If the subscriber has a Blue Shield contract, the last letter in the series will be either a capital "S" or "F" for single or family Blue Shield coverage depending on which type of contract the subscriber holds. If the subscriber has no Blue Shield contract no additional "S" or "F" will appear in the square after the number. If the subscriber has only a Blue Shield contract, the letter "F" or "S" will appear thus "—S" or "—F." A similar explanation is also contained on the identification card itself.

If the subscriber has no Blue Shield contract, this should be explained to him, and in those cases where he maintains that he has Blue Shield coverage regardless of the identification card, the suggestion can be made that he clear this with the Blue Shield office before a claim is submitted.

The second general procedure involves asking the subscriber a few simple questions. As stated before, 10 per cent of the rejections involve services rendered to nineteen-year-old dependents, services prior to the contract's effective date and services rendered after the contract is cancelled. Thus, the patient should be asked his or her age if a dependent, and if he or she is over nineteen years of age, a claim should not be submitted under the parents' contract. The other two items can be covered by asking the subscriber when his contract went into effect, and whether or not he remains in good standing insofar as his premiums are concerned.

Such measures in the doctor's office will have an extremely salutary effect in reducing the amount of paper

work required of the doctor and his staff. In addition to this advantage, they should help in the collection of accounts directly from the patient rather than delaying collection through first routing it to Blue Shield. And a by-product of these advantages to the physician is the avoidance of poor public relations, and misunderstandings for Blue Shield in cases where no Blue Shield contract is in effect.

Executives of the Blue Cross and Blue Shield Plans of the United States and Canada held their annual conference in Hollywood, Florida, from April 12 to 16. The conference took up matters of national policy and means by which co-ordination of activities of the various plans can be extended.

During the conference, Richard M. Jones, Chicago, Director of the Blue Cross Commission of the American Hospital Association, announced that more than 44,000,000 people are now enrolled in Blue Cross Plans. This is an all-time high for the non-profit hospitalization plans which have been approved by the American Hospital Association.

"This is nearly 28 per cent of the entire population," Jones said. "In many areas the percentage is much higher. In Minnesota alone, approximately one million subscribers and dependents are enrolled (one out of every three persons.)"

More than 25,000,000 people are now enrolled in Blue Shield plans . . . 16 per cent of the entire population. In Minnesota, over a half-million persons are protected.

Guest speakers at the national conference of Blue Cross and Blue Shield plans included Admiral W. J. P. Blandy, U.S.N., Ret., president of the Health Information foundation, New York, who spoke on "Assisting the Cause of Voluntary Health Insurance," and Artemas C. Leslie, Pennsylvania Insurance Commissioner, whose talk was entitled, "An Insurance Commissioner Looks at Blue Cross and Blue Shield."

Other guest speakers included David J. McDonald, Pittsburgh, president, United Steelworkers of America, CIO, and A. R. Mathieson, Pittsburgh, United States Steel and Carnegie Pension Fund, who discussed, respectively, the stake of labor and management in health care. More than 1,500,000 workers and dependents in the steel industry are enrolled in Blue Cross . . . among the largest enrollments within any one industrial group.

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BOOK REVIEWS

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

BOOKS RECEIVED FOR REVIEW

THE WECHSLER-BELLEVUE SCALES—A Guide for Counselors. C. H. Patterson, Veterans Administration Center, Fort Snelling, Saint Paul, Minnesota. 139 pages. Price \$3.75, flexible binding. Springfield, Illinois: Charles C Thomas, 1953.

DIAGNOSTIC TESTS IN NEUROLOGY. A Selection for Office Use. Robert Wartenberg, M.D. Forewords by Sir Gordon Holmes, M.D., F.R.S., and Stanley Truman, M.D. 228 pages. Illus. Price \$4.50, cloth. Chicago: Year Book Publishers, 1953.

BCG VACCINATION. Report prepared under the direction of Lydia B. Edwards, M.D., Chief of Field Studies, and Carroll E. Palmer, M.D., Ph.D., Director, WHO Tuberculosis Research Office, Copenhagen. 307 pages. Illus. Price \$3.00, paper cover. New York: Columbia University Press, 1953.

THE OCULOROTARY MUSCLES. By the late Richard G. Scobee, B.A., M.D., F.A.C.S. Second Edition. 512 Pages. Illus. Price \$11.00. St. Louis: Mosby, 1952.

This edition has 502 pages and 159 illustrations, compared to 352 pages and 112 illustrations of the first edition.

Many of the sections, notably those dealing with physiology, have been rewritten with more detail added. The functional and surgical anatomy sections have been enlarged as well as those on hyperphoria and exophoria.

The section on therapy is rewritten to cover more specific problems, and a long awaited chapter discussing reasons for failure in tropia surgery has proven to be one of the main attractions of this new edition.

WILLIAM J. HULTGEN, M.D.

CLINICAL ELECTROCARDIOGRAPHY. By Francis F. Rosenbaum, M.D. Edited by Henry A. Christian, M.D. 206 pages. Illus. Price \$4.50. New York: Oxford University Press, 1950.

Clinical Electrocardiography by Francis F. Rosenbaum, M.D., published by the Oxford University Press in 1950, and appearing as reprinted from Oxford Loose-Leaf Medicine with the same page numbers as in that work, is a succinct and clear exposition of modern cardiographic procedure.

Unipolar precordial leads and unipolar limb leads are discussed, the latter in Wilson's terminology, not that of Goldberger. The discussion of the mean electrical axis is very good, and the diagrams shown in Figure 51 are particularly apt.

The discussion of myocardial infarction is adequate, particularly the section headed "Myocardial Infarction Complicated by Bundle Branch Block or Arborization Block."

The discussion of the anomalous atrioventricular ex-



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Esophageal Surgery, one week, starting June 22
Fractures and Traumatic Surgery, two weeks, starting June 15
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citation (Wolff-Parkinson-White Syndrome) is particularly good in its description of the cardiographic deflections. Unfortunately, the upper and lower limits, in seconds, occurring in this condition are not given.

Finally, there is a very satisfying discussion of heart block, extrasystolic arrhythmias, and paroxysmal tachycardia.

The entire book is well-executed and should be in every cardiologist's library. The points discussed above were handled in a way that particularly appealed to the reviewer.

EDGAR T. HERRMANN, M.D.

DOCTOR IN THE HOUSE. By Richard Gordon. 186 pages. Price \$2.75. New York: Harcourt, Brace and Company, ©1953.

Partly with affection, but mostly with good-natured banter, a London doctor casts in the form of a fictional narrative the life and struggle of an English medical student. In a steady flow of wit, he describes the medical student's introduction to classes and King George's pub, and he follows his school life through to the final examinations and the subsequent attainment of a medical degree.

In order to grasp and portray so cleverly the lively sketches of his fellow students and associates, Richard Gordon has drawn heavily on his imagination, yet his anecdotal style makes the impossible almost believable.

Although this book is written for general publication, and lacks highly technical language, the humorous tone, medical word-play, and ludicrous similes (the Chief Surgeon is described as a "therapeutic thunderbolt" who could "slit a Christmas turkey to ribbons in a couple of minutes"), makes this amusing reading for anyone in the medical field, as well as the laity.

BETTY R. WARD, M.T.

CEREBRAL PALSY

Cerebral palsy, a crippling disorder handicapping more than 550,000 U. S. children and adults, received wider medical attention during 1952 than ever before, Dr. Charles F. McKhann, medical director of the United Cerebral Palsy Association, New York, reports in the section on cerebral palsy prepared for the new edition of the American Peoples Encyclopedia Yearbook which will be published soon. Although no general preventive or cure for the condition has been found, important progress in the treatment and rehabilitation of cerebral palsied persons has been made, Dr. McKhann asserts.

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